

Herald 181

Chapter 181 Alexander's New Home

Alexander and his entourage had decided to take up residence in the western part of the city, reserved exclusively for the nobility.

It was a hilly part of the city, and being higher than the other parts meant cool air and a much better view.

The location also blew all foul smells away from them, keeping its residents sweet and fresh.

Alexander's military commanders and various artisan leaders took up residence in the many empty noble houses, while the slaves and soldiers were placed in the various barracks and servants' quarters attached to the noble house.

Alexander, accompanied by the royal entourage naturally took over Pasha Muazz's estate, which proved true to its status in grandeur and opulence.

The total area it encompassed was huge, almost two square kilometers in its entirety as the manor estate extended well out of the city.

It had its own little village community that oversaw the sixty hectares of farmland around it. It had lush forests surrounding the estate, which was used as hunting grounds by the pasha and his friends in their leisure, with small game animals and as Alexander would find out later, even humans.

The entrance to the beautiful estate was a huge arch made of granite, with ornate cast iron gates acting as doors, its beautiful walkways paved with the highest quality stone and curtained with thick, luscious bushes of flowers, an imposing statue of Pasha Muazz's ancestor standing magnificently at the center of it.

There were two lovely gardens with vibrant and beautiful flowers, rare and beautiful trees with delicious fruits, and exotic birds and butterflies adorning them on either side of the mansion.

The gardens themselves were designed like a maze so walking through them was always exciting, while the back of the mansion was a beautiful open space for the nobleman to host open-air parties, furnished with swings, ornate benches, and even a small horse race track.

And of course, there was the centerpiece of it all, the jewel around which all these landmarks were built, the marvelously luxurious mansion.

The mansion was three stories high, with magnificent spires and windows, made of the highest grade stone and timber, and coated in pure white limestone that reflected the sunlight almost like a mirror, making it look like a heavenly construct on earth.

The mansion stood directly atop a hill, haughtily looking down on the peasants below, while its grandness and regality left none to question who were its inhabitants.

And naturally, the interior matched, if not exceeded the outer extravagance as the insides were huge in scale, more than thirty thousand square feet in area and with over a thousand rooms including the servant quarters, multiple kitchens, halls, ballrooms, and many more.

Just beyond the exquisite front oak door lay the huge grand outer hall, carpeted in a thick, red carpet with golden embroidery, furnished with huge, comfortable couches, ornate tables and chairs to entertain guests, and two massive fireplaces.

The walls had pompous oil paintings of various men, women, and children hanging off of them, along with long fabulous frescoes and intricate mosaics decorated into them.

At the end of the hall, two large spiral staircases from either side led upstairs, guarded by ornate staircase rails made of gold and silver on both sides and with a canopy of chandeliers hanging above them, like the person climbing these stairs was passing through a royal procession.

And the most beautiful structure of the outer hallway lay overhead, where a huge glass chandelier hung off the ceilings, the biggest in Adhania and possibly in the world, like a princess wearing her tiara.

Alexander had come to this place in the first week of Zanzan but found it to be deserted, with no staff in sight and a thick layer of dust coating the natural radiance of the place.

So, he had sent his servants to clean the place two days earlier, and now that they had sent word that the mansion was prepared, he decided to move in with everyone.

"This place is too grand." Cambyses subconsciously commented.

Even after having lived in unanimously the best house in Adhania, the shock Cambyses was experiencing was not any less.

The palace belonged to Ptolomy, which was another man's house, a stranger's abode in which she had taken refuge for a few days.

But this house, this house was her's.

And as the mistress of the house, she would reign over all those who resided inside, save for one, and the thought of having dominion over such a beautiful, magnificent mansion made Cambyses go over the moon.

After all, which girl didn't want a lovely house to call home?

And this was a very lovely house no doubt about it.

Like the traditional Adhanian style, the house was divided into two parts, the outer guest part for reception and general guests and the inner personal part for one's own use and for entertaining close friends and relatives and for the cooks, maids, gardeners, etc, to their job without ever the guests laying their eyes on them.

This second part was situated behind the outer part, being accessible by doors located inconspicuously around the hall, and was where the life of the house existed.

There were the kitchens and servant quarters to the left, the entrance to it was via a solitary door at the far end corner of the outer hall, below the staircase in a dark part of the room, its location chosen as such so as not to draw any attention to it.

In the center back portion of the house was the central hall, where surrounded by high ceiling porticos stood a giant, magnificent statue of Ramuh at the very center of it.

The statue was placed in an open roof square, so as to allow the god to see and feel the world around him, and surrounding him was a huge basin filled with water.

This basin collected the rain which fell through and was a manifestation of Ramuh's domination over thunder, lightning, and rain.

The central hall was the most important part of the house, as this was where one entertained one's important guests, from close friends visiting for a chat, to secret trade deals, to even meeting one's enemy to discuss treaties.

This hosting of one's allies and enemies was mainly done in a study room accessible through the right portico, which also doubled as an art room.

This was Pasha Muazz's personal study and likewise decorated to befit its owner's status.

Rich expensive tables and velvet chairs acted as furniture, couches, and dining tables served as means of entertainment, while hugging the entire walls, huge bookshelves filled to the brim with scrolls and manuscripts showed off the pasha's personal book collection.

The walls had golden mosaics and jeweled frescos all over them, while Pasha Muazz's true masterpieces hung off them.

Magnificent paintings, collected over generations, made with exquisite, expensive colors and painted by the most renowned artists of the last few centuries, depicting the most realistic pieces of art- from the pasha's various ancestral figures in dazzling armor to beautiful landscapes to beautiful women all graced his personal study, while the sunlight from the open square made the golden frames they were encrusted upon sparkled with radiance.

The room even had a primitive type of central heating below it, using smoke and heat from a furnace below to keep the room warm.

It seemed Pasha Muazz really liked this room.

While on the left side of the portico was another dining room and a place designed to recite poetry, make paintings, and debate philosophy, with comfortable couches, beautiful benches, and ornate table stools to facilitate the practice of such art which was viewed as the pinnacle of high class and nobility in the eyes of Adhanian nobility.

Backing away, on the right of the outer hall was the storehouse, filled with all sorts of mischievous things like food, cooking supplies, various tools, etc, with this room being connected to the kitchen on the left by an underground tunnel so as not to disturb the guest in the outer hall.

The second floor consisted mainly of guest rooms on both sides, with a second even more massive grand hall in the center of it.

The primary purpose of this hall was to host balls and end-of-year parties, while the lower outer hall was mainly used for receptions.

And then on the third floor were the personal rooms, another ballroom, and the attic.

It went without saying that all these rooms were lavishly furnished and decorated with no expenses spared.

In addition to these extravagances, throughout the house, there were many small doors and access points, dotted across the entire mansion as a way to move people without others' notice.

This was done to keep the sight of servants away from the guest, for family members to quickly get to far away rooms, and to move unsavory elements in and out of the building without the notice of prying eyes.

All in all, the whole mansion radiated an aura of excess and nobility and Alexander was quite pleased with his new abode.

Chapter 182 Three Crop Rotation

Alexander sat in the second-floor outer hall, where he was holding council with his advisors, two days after he had moved in.

"So, where are we with the farmers?" Alexander asked Meniscus from sitting at the head of the table.

Food was the most important resource for Alexander to secure right now and overseeing its production was his first and foremost priority.

"We have done as you have instructed comma...pasha," Meniscus replied, slightly calling Alexander by the wrong title.

And then continued, "The surrounding land had fortunately been already titled by the women folk under the instructions of the nobles and so the twenty thousand slaves had little problem planting the wheat and rye."

This instruction to plant seeds was given five days into his stay in Zanzan, when the city had mostly been cleaned and so Alexander had charged Meniscus, the most experienced in his group, to lead the twenty thousand slaves out of the city to immediately start planting wheat, rye, oats and various other vegetables following a three-crop rotation system.

And almost a week later, it seemed that the seeds of the most important carbohydrate were in the soil.

Meniscus continued reporting his progress, "As you have instructed, we have followed the new three-crop rotation plan, planting twelve thousand hectares with wheat and rye by once plowing the field, we also plan to soon plant another twelve thousand hectares with legumes such as peas, lentils, and oats after plowing the fields are complete, and the rest of the field will be plowed twice and left to fallow." Meniscus finished.

"Hmm, okay!" Alexander lightly smiled.

And then praised, "You did well to get the grains in the ground before November. Ideally, it should have been planted by September or early October, but even planting it late October like now is okay,"

"Hehe, no, no, this old man deserves no such credit. In fact, it's Pasha Alexander who deserves all the praises," Meniscus humbly chuckled.

And then explained, "The reason we could do so is because of the heavy plow and the horse collar. These are revolutionary tools invented by the divine son of Gaia. The slaves and farmers almost have foams coming out of their mouths singing their praise."

"They say they have never seen the soil part so easily. It's like drawing hot knife through butter. And they say horses and mules could never work as hard as they did before. These credits only belong to the great lord," Meniscus had an excited, almost squealing tone to his praise as he sincerely expressed his admiration toward Alexander.

"..." Alexander only lightly smiled at these expected results as many others joined Meniscus to flatter Alexander.

"Haha, of course, of course, it's the great Alexander we're talking about," Menes roared uproariously.

"His inventions are always amazing," Theocles added.

"With the great pasha at the helm. Zanzan will become the greatest city in Adhan," The leader of the blacksmith guild Harun praised.

But the man being praised didn't show much elation on his face, instead being careful not to be washed by the oil of flattery that came his way, as he knew Meniscus had certainly embellished the truth.

Even with the heavy plow and having a beast of burden to pull, plowing a field of heavy clay was no 'drawing hot knife through butter'.

It was back-breaking work with the plow requiring to be both pulled by the horse or mule and pushed from behind by the man to maximize speed.

There was another man that didn't share the other's enthusiasm, Melodias, who had a rather worried frown on his face.

"Ahem," Melodias coughed a bit to draw attention towards him and then first praised Alexander, "Pasha, it is no doubt that these inventions are revolutionary."

But afterward, he revealed his misgivings, "But the amount of land we are cultivating is too small to feed us till next year's winter!"

He then delineated. "The native farmers tell me that a hectare can make about three hundred kilograms of wheat. With the twenty-four thousand hectares we plan to cultivate, that's only about seven thousand tonnes of food. With its current population, Zanzan will use that up in less than four months, while the crops planted in spring will take six months!"

Menicus too joined to share his concern, as he then spoke up, "I too share Melodias's fears, pasha. Even if we assume the new plows will increase yield, even if we assume it to be double, we will still be in trouble. Remember Pasha that more people will come to the cities once the news of the free food spreads, so food will run out much faster," Menicus warned.

Alexander was very pleased by this exchange.

Not by the prediction of a shortage of food, that was terrible.

But what Alexander was pleased by was that the people around him were not boot-licking sycophants, constantly trying to suck up to him, but actual thinking, using their brains people.

They were not afraid to point out his mistakes and even criticize him on points they thought him to be wrong and many had learned Alexander's preferred way of arguing and started to emulate it.

Like how Melodias had used maths to make his case, and even though the math was very simplistic and a bit wrong, like assuming every crop would have the same yield as wheat, it still made its point.

The numbers spelled out by Melodias were also spoken from a piece of papyrus, meaning Melodias had done his homework and came to this meeting prepared.

This made Alexander inwardly very happy as it meant that Melodias was very serious about his job and Alexander made up his mind to delegate various crucial jobs to the ex-mercenary leader.

Alexander was also pleased by the dynamic discussion going on as he felt that he could just draw a vague outline of a plan and then leave these people to figure the rest of it out on their own, thus drastically reducing his work burden.

Alexander gave a light smile towards the worried faces of the people around the table and spoke, "I'm aware of the problems you stated. And I even know that each farmer can cultivate around two-three hectares of land by himself. That comes to close to sixty thousand hectares of potentially arable land, whereas we are only cultivating less than half."

Alexander then paused to see the others nod in agreement with his statement and then stare expectantly for his explanation.

"The reason for this is simple- we don't have enough plows and pack animals. And more importantly, there is no time. November is upon us and any grain we plant now will only die and rot. That's also why I put twenty thousand men on a ten thousand man farm, to get the seed into the ground as soon as possible."

Alexander's reasoning convinced his entourage, while some drew rueful breaths at the challenges that lay ahead.

Among the rueful ones was Menicus, who drew the heaviest breath, "*Sigh*", the pasha is right. We only have a thousand heavy plows and even with the horse collar, we can only get about a hectare done in a day per plow. If the pasha hadn't ordered the tilting be done even at night with shifts, I'm afraid we wouldn't even have what we planted."

Due to time and cargo capacity constraints, Alexander could only bring a thousand plows with him which was proving to be too few and inadequate.

"So, that's why the vegetables have not been planted, yet!" Melodias connected the dots.

"Yes. Although the horse collar has literally doubled the amount of work a horse can do, it's still not enough," Menicus drew the same rueful smile he had begun his speech with.

But for the doom and gloom that was going on, Alexander himself was not that worried.

He knew the effects of heavy plow on heavy clay soil and was confident that it would not just be a double increase, but a triple one or possibly even a quadruple one.

Heavy clay soil was problematic because it held onto water too well and didn't drain properly, obstructing the breathing of the roots of the crops.

But when tilled properly, it would transform into a very fertile form of soil, capable of producing yield far greater than the light soil dominant in Adhan.

Alexander expected the wheat to be close to a ton per hectare, and to boost yields even further in the future, he had begun to make the sanitation unit dump all the natural waste into the empty land that had been left to farrow, which would act as a natural fertilizer.

This a-ton-per-hectare yield was which was nothing impressive as, in his modern world, four tons of wheat per hectare was easily possible, though that was with the help of modern fertilizers and pesticides.

But for now, Alexander decided to stay quiet about this new tool, and reassured the men another way, "We have brought a lot of food when we came and that should last for some time. Furthermore, Pasha Farzah has also promised to sell us even more after the spring harvest, so, the food situation is not dire yet."

This bough a bit of relief and color back to the men and then Alexander moved on to his next topic- the military.

Chapter 183 Roman Legions

"How are the city defenses?" Alexander turned to Menes.

"No problem." Menes waved his large palm to reassure Alexander, adding, "As you said the city was built to resist Tibias. Its walls are still high and strong and we will have no problem defending it with so many soldiers at our hands."

"Hmmm, that's good." Alexander nodded, pleased that there was little chance of his city being sniped out under his nose.

With the defense secure, he then turned to focus on the offense.

He then raised a critical issue about the military, "The phalanx has shown some serious flaws in our last battle. And Zanzan is even more hilly than Adhan. So, this flaw will continue to manifest itself even more in the future. How do my military commanders intend to fix this?"

This very hard question drew blanks from everyone.

All understood that the phalanx had become obsolete but what Alexander was asking them to do was close to impossible.

They were asked to draw up a completely new, effective infantry formation from scratch right in front of him right now Parting the red sea would be easier.

"Ahem," Menicus was the first to break the awkward silence with a cough, "The pasha's concerns are certainly justified." He admitted.

And then pointed out the problem with Alexander's expectation, "But the phalanx has been in use for thousands of years, and proved itself over countless battles. So, changing to a new, more effective formation is no small task. Perhaps the military commanders need a bit of time to test out new battle tactics and then let the pasha judge its effectiveness," Menicus asked for more time.

"Yes, a year should be enough. In the meantime, we can use the phalanx defensively and not launch any large campaigns." Menes offered a time frame and a compromise.

All this sounded very reasonable to Alexander and he was also very glad to see his military commander rise to the challenge and face the difficulties instead of moping about the virtues of the phalanx.

And even the time wanted by Menes was not at all long, in fact, it was very short.

But for the current Alexander, even that one year was too long.

So, he proposed, "I have thought of a new formation. Please give me your thoughts!"

This made everyone turn to Alexander while the same thought came to them, 'Is there anything he doesn't know?'

They gazed at him as Alexander handed out a piece of papyrus to each of them, with various numbers and words written on them, a paper that Alexander had worked on while idling during the cruise.

Alexander gestured using his palms, "As you can see on the papyrus, the new structure of the army is detailed on it. But, let me explain,"

He then gave a detailed breakdown, "The smallest unit of the new army will be a squad- made of ten men- eight soldiers and two servants with a mule. The leader of this squad will be chosen from these men and be called a squad leader."

"Ten squads (10) will make up a company (100 men), led by a leader called the sergeant."

"Six companies will make up the base unit of the army- called a battalion (600 men) led by a captain."

"And this battalion, consisting of four hundred and eighty soldiers and one hundred and twenty servants will be the smallest army combat unit instead of the two-hundred-fifty-men phalanx."

Alexander paused to see if everyone was keeping and noticed everyone was looking at the papyrus, trying to match what Alexander had written to what he said.

So Alexander continued, "And ten battalions will be combined to form a legion led by a Legion leader. And this legion of six thousand men (four thousand and eight hundred soldiers and one thousand and two hundred servants) will be our basic deployment unit during any war. A legion should be able to travel, fight and maintain itself independently in any engagement and its leader must be able to carry out the will of Zanzan and its people."

By this Alexander meant he would directly issue orders to the leaders of a legion and then they will be expected to carry them out.

This brand new infantry structure was all too sudden for everyone and without even trying it out in a mock battle, the military commander didn't know whether to praise it or find flaws with it.

Even the usual sycophantic Helliptos didn't seem to know what to say.

After another repeat of the awkward silence, as usual, the most experienced veteran there spoke, "Pasha, there is a reason a phalanx is two hundred and fifty men big. It's because a commander can reliably command only that many men without losing control," Menicus said with a little frown.

But he was immediately corrected not by Alexander, but Menes, "No, leader, I'm afraid you are not counting properly." The black giant spoke up.

And then pointed out, "In the phalanx formation, a captain had around twenty-five squad leaders under him. But now, with the formation of ..ummm" Menes looked down on the papyrus to look for a specific word.

"Company," Alexander helped out.

"Yes, company," Menes repeated.

And then continued, "With the formation of the new sub-unit, the company, the captain will have to deal with only six people under him. And even sergeants will have to deal with just ten squad leaders."

"So, you see the work will not double but be quartered!" Menes finished his reasoning.

This drew very impressed looks from everyone, including Alexander who liked Menes's use of maths, something he had taught the man to use.

Menicus too nodded understandingly, tacitly admitting his oversight.

But then another man, Melodias, spoke up about his own concern, "Pasha Alexander, the number of servants seems pretty low for an army. Usually, a servant can at most serve two soldiers and even that's very difficult. My lord should know this!"

On the surface, many might feel even twelve hundred servants is too much, much less the two thousand being demanded by Melodias, but it should be remembered that an army needs a lot of logistical support to operate.

It needs food to eat, firewood as fuel, maintenance of weapons and armor, and proper care of the pack animals.

And to do all these, extra help is essential as a single soldier can't fight and also complete everything else.

Alexander being a slave in the mercenary group was of course aware of the burden placed on a servant and gave his reason, "There won't be the need for so many servants because we will do away with the large, cumbersome baggage train pulled by slow animals and instead require individual soldiers to carry his own gear!"

Alexander's seemingly innocent suggestion made everyone who understood what he suggesting go wide-eyed and some even visibly paled in fright.

"That...comman...Pasha, that's too much!" This came from the most unlikely of sources- Helliptos, who had always supported Alexander, but now felt that Alexander was asking them to do the impossible.

And even if Heliptos felt that way, it could be imagined could the others felt.

But Alexander snorted in disdain, "What too much? I have carried close to fifty kilograms every day for years and I was a child then. Are you saying that my army can't do what a child can?" He chided Heliptos.

Alexander did carry such weights sometimes when the baggage carts were full and there were no spare animals, forced to march for hours with the heavy load on his back.

But doing it for years was clearly an exaggeration.

This was a fairly uncommon practice and it was rarely done, unless in dire circumstances.

But few knew about this and Alexander's strong rebuttal made Heliptos sink a bit and he quickly lowered his head in fear.

And seeing this Menicus quickly jumped in, "Pasha Alexander, we are mercenaries. We are professionals and of course, even carrying another man is no problem for us." He exaggerated.

But added, "However, this is the army you are talking about! And those untrained, conscripted peasants won't be able to take such heavy loads."

Usually, an army consisted of ten percent professionals and ninety percent levies. Even the famed Adhanian army was such, with the nobles making up the professional core and the peasants the main body of the army.

And without training, ordering the army to carry such loads and then expecting them to fight was a recipe for mutiny.

Hence Menicus's fears were very justified.

But Alexander had certainly thought of this, "There will be no conscripts or levies in my army. My army will be an entirely professional army!"

This statement sent his military commanders into another quagmire of confusion and a meek voice from Grahtos asked for clarification, "Does the pasha mean like a permanent mercenary army?"

Alexander lightly smiled and nodded, "Yes, like a paid mercenary army, But it will be loyal to only us."

This drew some murmur from the crowd as this was not a new idea but in most eyes a stupid idea.

"Ahem, Commander, I think that's a very bad idea." Menicus strongly gave his opinion.

And reasoned, "What you are proposing is something only similar to what Exolas has, and because of their permanent army, they have virtually no economy to speak of and are forced to rely on its sister city-states to provide for all its essentials while it provides the muscle and security to them."

Menicus as an experienced man who had traveled all over Thesos certainly knew a thing or two about the major city-states.

He also knew why the demand for his services were in so high demand and why no one wielded a large standing army.

Because it was stupid.

Chapter 184 Professional Army

Alexander understood what Menicus was implying and understood the angle he was coming from.

There is a reason why there was rarely a standing army in ancient times, the notable exception being the Romans.

But since the Romans could do it, Alexander asked himself why he could not do it too.

So he decided to educate his military commanders a bit, "It is true that most of the time, soldiers are levied in times of war and disbanded when the war ends." He started.

"But why is that? Why does the government let go of such experienced people? Why can't we have a strong standing army like Exolas and a strong economy like Cantagena? Why do we have to pick and choose," He asked passionately.

And then answered his own question, "This is because we live in an agricultural society, where the primary product is food. And a farmer can typically only produce a surplus of ten percent.

This means that nine farmers are needed to feed just one non-farmer."

Alexander then raised his index and said, "So, you see, you have ninety percent of the population engaged in just producing food, while the other eight to nine percent are artisans like potters, blacksmiths, jewelers, tailors, carpenters, bakers, etc who make everything else that's man-made. That leaves the society with a manpower surplus of only one to two percent, which also includes the nobility - who don't work."

"So, fielding a large permanent army is very hard as one needs to sacrifice his economy and tax revenue and thus allow one to take the most healthy and most productive people of the workforce out of their jobs and basically have them do nothing for almost the entire year."

As Alexander gave his long speech, all stared at Alexander, hanging onto his every word and letting him continue, "And yes, remember armies do nothing as armies do not produce anything. They do provide the service of protecting the products that are being produced- food, clothes, people, medicine, etc, and the cities that produce them."

"But this is really needed if these products are being threatened. City and farmlands are unlikely to be under the threat of war every single day for the entire year."

"So having a standing military all year long doing almost nothing but waiting on their asses for an enemy to attack them is not a good use of manpower."

Alexander seemed to be arguing against himself as everything he said was detrimental to him.

As he said an army may loot and plunder produce from others, but stealing was not production.

And even if one were to argue that stealing was production as it adds value to the economy, armies rarely pay themselves with solely the loot they collect.

What they do is help one take control of generators of production, such as farmlands, livestock, mines, etc, that then help fund the army.

But these generators are still run by the other ninety-nine percent, ie- the conquered people who work and pay taxes to keep their conquerors in power.

And this problem is further expounded by the fact that it takes at least fifteen to twenty years to produce a good soldier from birth, while it takes only a second to destroy one.

And this was not even considering the fact that killing a soldier was the equivalent of killing one's most valued, most productive, and the best part of the labor force, a man in his prime capable of adding a lot of value to the economy.

Alexander didn't finish there and continued after smiling a bit at his commander, "And this is where the existence of mercenaries comes in. Mercenaries are veteran soldiers who can turn up anywhere to resolve any conflict. Although a city or a country might have one or two big wars per year, there are countless battles happening all over the region. And being mobile, these mercenaries can go to those places of conflict and fight on one side for a fee, hence they are rarely idling and doing nothing."

Mercenaries usually would set up camp next to their employer until the job was finished and would stay there until a new one was acquired.

And although it sounded like this might take a lot of time, typically, as Alexander said, a new job would land within two to three months.

Everyone there, including the mercenary leaders was amazed by Alexander's insight.

Although they were mercenaries, they never so clearly understood their role in society, a role that an eighteen-year-old boy such as he could see so easily.

'What frightful insight!' They commented.

But then almost simultaneously the same question rose in many hearts, "If he understands all these so well, why does he want a standing army?"

Alexander seemed to read their mind and asked, "You must be all asking why don't we employ mercenaries then?"

"And the reason is because mercenaries fight for you when you have the money and are winning. They are not loyal to anyone and they will be with you as long as you can pay. But if someone with a higher bid comes, can we guarantee their loyalty?" Alexander asked.

And then pointed out, "There are many instances of employers being unable to pay mercenaries, and they turning on their employers, attacking and sacking the city to get their remuneration. And if a battle is about to be lost or the chances of winning are not good, many might cut their losses and run."

"But a standing army, an army created to protect Zanzan will not. Because they have a large stake in the city, their homes, families, and friends, unlike the mercenaries." Alexander gave his reasoning.

This reason impressed most, and they bought Alexander's explanation.

Except for Meniscus, who had personally seen the state of Exolas and didn't want Zanzan to follow in its footsteps.

So, he raised his gruff voice, "Pasha Alexander has raised some good points. Personally, as a mercenary leader, I'm guilty of the things he described. I did run from my employer and I did sack cities when they withheld my pay. And as with Samaras, we all refused to go to battle when we thought the chances of winning were low."

"But," Meniscus's voice hardened, "We fought better and harder than anyone on the battlefield when we were treated properly. And in any battle, our losses were always on the high side. We never ran when the going got tough. The first to break were always the untrained peasants," Meniscus had a heavy tone of pride in his voice.

"I too agree with leader Menicus. Instead of spending so much money on maintaining a standing army, would it not be better to save it and then employ mercenaries using that fund? It will be far cheaper!" This was spoken by Theocles, who as the quartermaster of the army had always had a good nose for money.

"That's right. Maybe the pasha should reconsider. After all, everyone uses mercenaries and they are all fine." Melodias voiced his support.

Alexander lightly smiled at these suggestions.

They had spoken this out of their own knowledge and experience, and although it sounded convincing, Alexander believed he knew better.

A standing army was critical to any nation's survival and a mercenary army could never be the alternative.

After all, land belongs to the one with the biggest muscle, and a mercenary leader could very well snatch it using his bigger muscle.

Alexander feared that a mercenary leader would get the idea to replace him just as Alexander had the same idea about Ptolomy.

But he did not brush off these suggestions like an imperious lord.

Instead, he decided to let actions do the talking, "Please remember that we are at war. We only have six years till the conflict restarts and very likely even less."

Alexander felt Amenheraft, being the much stronger side, might decide to tear up the agreement early, possibly after two years as originally requested by Manuk.

This drew a few worried faces while Alexander continued, "And also remember that we have a lot of hostile nobles around us. We are rulers of the Zanzan province in name only, while in reality we only control the city and its surrounding area."

"The pasha is right," Grahtos nodded seriously, adding, "There are too many enemies around the city. In addition to the nobles, there are roaming bandits everywhere around the city and that's not to even mention the constant threat of Tibias."

"Hmmm, I too believe we should have a standing army." Heliptos chirped up,

"Instead of hiring expensive mercenaries, we should expand the army using our citizens." He claimed.

Of course, these people didn't have a completely altruistic motive when supporting Alexander.

Being mercenaries, none of them wanted to go back to farming but wanted to look for glory on the battlefield, unlike the old Menicus, who just wanted to peacefully retire.

This presence of a constant threat and strong peer pressure finally managed to convince the old man of the necessity of a standing army and so he grumbled, "Fine, fine. Let's do it as the lord suggested."

Chapter 185 Money And Equipment

Menicus didn't simply fold under everyone's pressure and accept the proposal.

But instead chose not to oppose it for the time being because coincidentally the proposed legion was around five thousand soldiers strong, almost equal to the total number of mercenaries and Cantagenans, and even he would agree that letting these men be farmers would be too much waste of talent.

In addition, given their likely numerical inferiority in near-future combats, they would almost undoubtedly have to depend on the quality of their troops to win battles.

But even then, though Menicus accepted it for the time being, he still disliked the idea of a standing army.

Menicus's vehement dislike for a standing army was related to his upbringing.

He was born in Exolas, and saw firsthand what the policy Alexander was suggesting had done for the city-state.

Because of its fanatical approach to its army, it rarely did anything else, leading to very poor standard of living for anyone other than its soldiers.

Menicus had lost his mother and three sisters due to the poor conditions and the lack of healthcare and he blamed the Exolas's way of living for their death.

That was also when he had decided to switch sides with Cantagena.

And in this way, in his mind, the word standing army came to be equated with poverty and destitution.

However none present there knew the thoughts harbored by the old man and instead chose to move on.

Alexander spoke again, "Going back to topic, the professional soldiers will be expected to carry food for at least five-seven days, pots and pans to cook the food, entrenching equipment such as pickaxe and saws, ropes and baskets for miscellaneous things, while the mule will carry the tent, the mill to grind wheat into flour and various other things along with its own food." Alexander gave a detailed list.

And then added, "Of course, the soldiers will also have to bear their arms and armor. This will include a helmet, full upper chainmail armor over a linen thorax, leg greaves, two pilum javelins, a spear, a large rectangular wooden shield with a bronze center, a short sword for thrusting, and at last a dagger as a secondary weapon. So, all in all, he will have to carry thirty-five to forty kilograms while on the march."

Everyone was a bit shocked at the so detailed list of things said by Alexander and thinking back on his previous accomplishments, many felt it might be a divine revelation.

After all, this was a brand new concept, but somehow Alexander was already listing specifics.

"I think this is a very good new infantry formation. And I think we should give the new formation s test to find its capabilities," Melodias diplomatically said, not rejecting anything, but also not blindly accepting everything, instead preferring to let the results speak for themselves later.

Others also liked this, as Menes spoke, "Yes, let's do that. Things like the pilum javelin has proved its worth in the last battle as without it the center might not have held. But I am worried that replacing the spear with the sword will put us at a serious range disadvantage. So, we will have to test it out and see."

Alexander too wasn't sure how the Romans, whom he had copied this from, dealt with this.

But later mock battles would help him produce a standard manual on how to take on the phalanx.

First, the pilum would be thrown to kill or disable the phalangites by pinning their arms to the shields.

Then the two sides would come closer, the five protruding rows of the phalanx spears claiming many legionary lives at first.

But once close enough, the legionaries would charge, trying to close the gap between the spear tips by either locking shields and brushing the spear points away using them or by feinting low to bait the spears into pointing upwards, and then rushing under the pikes, where the phalangites would be almost useless and the legionaries would be in their element.

In this close-quarter combat, the spear's long reach would act against the phalangites, turning the pointy stick to just a wooden stick, while the shorter sword could hack and slash in the narrow melee.

And in this strategy, changing the shield from a round one to a rectangular shape was seen as essential as the shape allowed it to be locked onto each other without gaps, unlike the circular ones, and thus prevented stray spear strikes from killing the legionaries.

In this way, the legion could hold its own against the phalanx.

And although in a frontal attack, a phalanx was still superior, Alexander and his high command would decide to implement the much more versatile legion, capable of fighting in all terrain rather than the one-trick-pony phalanx.

But all these were in the future as right now Alexander agreed to his military commanders' suggestion and only nodded. "Okay."

But just as when he was about to move on to another topic, an unfamiliar voice spoke up, "Pasha Alexander's reforms are extremely detailed and well-thought-of. This old man's eyes have been opened."

This praise came from a well-dressed, middle gentleman whose biggest identifying feature was his large, callused hands.

The huge bearded man was called Harun and he was the representative of the blacksmiths, sitting here on Alexander's invite.

And until now this civilian along with his fellow artisans who had been invited here was happy to let the military men discuss their military affairs.

But there was something that Alexander said that drew his attention and he had to say it out aloud, "Please forgive this old man for speaking out of turn, but I seemed to have heard was something that I wanted to clarify."

Harun then added, "I heard the pasha say that each of the soldiers will be armored with chainmail and linen thorax. But this will be very good, but arming so many soldiers could be a challenge."

He explained why, "As you all know making linen thorax needs special tanners to process the linen and glue them together. And the end result is an armor even better than bronze cuirass as the latter tends to be brittle under attack. But this needs a lot of time and manpower to manufacture, meaning they are very expensive."

Harun further pointed out, "And this is not even talking about the chainmail. That thing is almost impenetrable, but it is also prohibitively expensive and time-consuming to make. That thing makes the linen thorax look cheap."

He thus ended by saying, "So, what I'm saying is that equipping all the soldiers will take very long and be very costly."

As soon as the bearded man stopped speaking, Menes chirped happily, "That's easy. We'll make the soldiers pay for their equipment."

He was very confident that he had found the magic solution as this practice was followed almost universally, in varying degrees.

Soldiers most of the time would only be given the weapon- the spear and the shield, and the question about armor and sometimes even food would be left upto the individual.

This created a very heterogenous army with various gear as each soldier bought whatever they had the means to buy and for Alexander, who was obsessed with creating a homogenous, coherent unit of form such an arrangement was of course impossible to accept.

And he made that clear, "Soldiers will not be responsible for their gear. All equipment will be standardized and be provided entirely by the state."

And before anyone could raise their objections, he quickly added, "Of course, I'm not blind to reality. We will only equip our soldiers with things within our means. I will expand the artisan guild in multiple magnitudes as soon as manpower becomes available to help cope with the demand and if even then both full chain armor and linen thorax are not possible, then we will provide with only one and ask the soldiers to procure more on their own."

This compromise suited everyone and they nodded in assent.

Then Grahtos quickly asked, "Pasha, what about the cavalry?"

The Sycarian had a worried tone to his voice as the new legion made no mention of any cavalry.

Alexander lightly smiled and assured, "Of course, the legion will have its own cavalry. Otherwise, how will the short-sworded legionaries defend against the prevalent Adhanian cavalry?"

He then announced, "Each legion will have five hundred cavalries with five hundred servants accompanying them. These will include a mix of scouts, skirmishers (light cavalry), and heavy cavalry."

"And just like the innovations in the infantry, the cavalry will also be upgraded to better suit the new battles." Alexander mysteriously promised.

"Oh! What are they?" Grahtos excitedly asked, his eyes sparkling like a kid that's been promised a shiny new toy.

"Haha, it will be easier to show you," Alexander chuckled as he gestured for the man to be patient.

He intended to make his cavalry like the medieval knights, a fully armored horse and man, charging into battle with a lance.

As Grahtos forcefully simmered his excitement down, the worried voice of Theocles sounded, "But Pasha, how are we going to afford all these?"

And this was a question that haunted not just this council, but every man who had an army to command.

Chapter 186 Peerage And Policy

Keeping a standing army was expensive.

In fact, it was bloody expensive.

And a very simple math could be used to demonstrate that.

The average peasant would earn a hundred fifty ropas per month.

A soldier would need at least two hundred (200) a year because of the dangerous nature of the work.

And cavalry would demand at the bare minimum three hundred (300).

So in a year, a legion of four thousand eight hundred men and the five hundred cavalries would consume more than ten million ropas!

And this was the lowest estimate, with little said about the servants, food, equipment, and pack animals.

A more realistic number would be twice or close to three times that amount.

And for context, a pasha from his entire province, which was on average roughly three hundred thousand square kilometers, would get in the ballpark of two to three hundred million ropas, whereas the area around Zanzan under Alexander's control was just a thousand square kilometers.

Even assuming Zanzan was an enormous, productive city (it was not), still, Alexander would consider himself very lucky to get ten million ropas in annual tax revenue, meaning he couldn't even afford to maintain a single legion for the entire year!

Even his entire remaining fortune of around three hundred million ropas will only last him just nine years.

And this was considering a mere five thousand and three hundred soldiers, which was nothing.

Any real war would require twenty to thirty thousand, while the major ones, like the ones with Amenheraft that were bound to happen at one point, would need twice or thrice the numbers.

This was certainly not sustainable.

And fortunately, Alexander had already thought of a way to shore up his income.

But it was a risky proposition and Alexander would confess being a bit nervous saying it out aloud.

But he decided to do it anyway, "The issue of money is certainly a big one. And we will need to quickly start earning money." He eased himself into it.

And then quickly bit the bullet and said, "Thus I propose a one percent land tax to everyone!"

"What, this is not what you promised us, Alexander." Melodias angrily stood up and pointed at Alexander, feeling incensed and betrayed.

"That's right, that's right. Why should we have to pay taxes?" This time it was Heliptos.

When Alexander had decided to put his hand on the greedy mercenary's treasure stash, all loyalty the man had flown out of the window.

"Commander, I implore you to reconsider," Grahtos, a religious zealot who had converted to the faith of Gaia, also asked Alexander to retract this dangerous statement.

Alexander scanned the table and saw all had some varying degree of displeasure etched on their face, except Menes and Theocles.

He expected this much resistance as not having to pay taxes was one of the biggest allures to being a landowner.

But Alexander couldn't back down as he intended everyone in his land to pay taxes.

But he also couldn't antagonize his military commander.

So, he cleverly bought time, as he gestured for the men to calm down using his palm, "Please, please, calm down. I never said the tax will be forever. It will only be for six years, till the armistice ends. By that time we will have the businesses running and it will be the business tax that will ride us through."

This placated the men a bit but the time still seemed too long.

"Pasha, six years is too much. Please decrease it." Menicus, the de-facto leader of the commanders asked Alexander, supported by the others.

Alexander however had no intention of doing this but didn't outright dismiss the plea.

Instead, he appealed, "Gentlemen, all of you are misunderstanding what this tax will do. This tax is not like the tax you paid before. Before, your taxes would go to the state and its rulers, faceless, unknown men who cared nothing for you."

Alexander then raised his index finger, "But, remember, you are the rulers now, Whatever taxes you pay will benefit you. Your taxes will be used to fund the army that will not protect some unknown nobody, but they will protect you, your family, and your wealth."

Alexander then revealed, "I have spent close to eight hundred million ropas on Zanzan, from the slaves to the grain to the animals to the ships...the list could go on. And the reason I did this is because I saw Zanzan as an investment. And it is my wish that all of you will do it too. Because your fortunes will rise and fall with Zanzan's fortunes."

This inspiring speech swept away the little acridness many had in their heart as they doubted they could ever earn eight hundred million ropals in their lifetime, much less spend it in one go.

Since Alexander was willing to do so, and since the arrangement was temporary, they finally consented.

"Good," Alexander lightly nodded and smiled, "Since we already discussed administration, I believe I should address your peerage." He decided to offer some sweet after dishing out the sourness.

This made everyone sit up straight as this was the prize for which they had left their home country to come to Adhania.

Even as they spoke, a ship containing these men's letters to their families asking them to come to Zanzan was making its way across the sea.

And many harbored the wish to greet their loved ones as a lord and a noble.

And so Alexander pronounced, "I name Menes, Shordar(Baron) Menes, I name Melodias, Shordar(Baron) Melodias....."

In this way, the military leaders and Theocles were made nobles.

"Thank you, my lord," They all then kneeled and proclaimed their loyalty to Alexander, swearing, "We vow to serve you loyally and faithfully till our bloodlines end,"

And then Alexander returned their vow with his own promise, "And I, Alexander, hereby swear to protect and guard my retinues with the utmost sincerity against all threats and stick by them through thick and thin."

After this ceremony, Alexander chuckled and used his hands to gesture, "Now, get up, get up." adding, "This is only an informal announcement. We will soon hold a feast and let the city know to make it formal."

"Hehehe," The crowd was full of smiles.

Alexander then decided to bring them back to earth a bit, "Please remember that all of you are only shordars (barons) now. That is the rank all noble families start at and I expect all of you to work hard to improve your rank."

Alexander was clearly an exception to the rule but usually, that was how noble families usually started and through time, conquest and proving their loyalty slowly made their way up the chain.

"Yes!" A unified chant was produced as the men's eyes glowed with zeal at the prospect of a better rank.

But then Alexander decided to dampen the mood a bit.

"Ahem," He gave a fake cough, "As you know the land around Zanzan city is too small, only around a thousand square kilometers. And so I will give you the title now, but your land will be given a bit later."

And this certainly dampened the mood a bit, but they also understood reality.

"Pasha, how long will it take to expand our territory?" The greedy Heliptos asked impatiently.

"Hmm, with the treaty in place we can't go recklessly attacking the other nobles too," Melodias had a displeased tone to his voice.

And the others shared similar feelings.

"Haha, don't worry, I have a plan," Alexander's cheerful chirp penetrated the acerbic atmosphere.

He then explained, "The nobles that left the city during the plague will certainly come back to take back their house. And when we refuse, it is likely they will plot against us."

"And then we can use the excuse of self-defense to annex those territories!" Heliptos in his excitement finished Alexander's statement for him.

"Um, that's good, that's good," Melodias nodded his head in appreciation.

"Yes, and even if they don't do it, remember that the king has given us the right to annex foreign lands. And Tibias is right next to us," Alexander hung even more bait.

And the men took it hook, line, and sinker as Menicus quickly asked, "Com...Pasha when do you intend to launch the attack? This winter?"

It seemed that the men were a bit too excited.

'Hold your horses, old man,' Alexander lampooned a bit at the over-eagerness.

Alexander then laid out his rough plan, "This winter is too soon for any offensive actions. I estimate that the new legionary concept and the new cavalry techniques will take at least a year to perfect and building all the weapons and armor will also take that long."

"There is also the case of building siege engines and gathering intelligence." He added.

"So, if there is no outside threat, we will launch an attack past the Cisrian hills next November," Alexander set the deadline.

This produced wide smiles across the men's faces, as they were relieved to know that the treaty would be of no hindrance to them.

And next came even better news, as Alexander announced, "And, let it be known that as long as it's possible, we will be launching a winter campaign every year for the foreseeable future."

And in this way, this proclamation would become Zanzan's policy for many years, very similar to how the Romans did it.

Chapter 187 New Appointments

Done with the military matters for now, Alexander raised another concern - concern about governance.

"The city administration posts are all empty and it's not possible to run a city with so many vacancies," Alexander said with a frown.

And then declared, "So I have decided to temporarily assign you some administrative positions until proper replacements can be found."

The military leaders all looked at each other at this announcement, wondering what they knew about outside fighting.

And the answer they came up with was not much.

But Alexander didn't seem to think so as he first turned to Menicus, "Menicus, you have done a fantastic job securing the fields before winter, *clap*, *clap*, *clap*." Alexander applauded.

"And so I intend to hand over the administration of the farms up to you," Alexander designated.

"I will work by my hardest, Lord Pasha," Menicus crossed his arms on his chest and bowed a bit, his voice somber and serious.

"Um, good." Alexander nodded and then emphasized, "Food is our most important resource and all of Zanzan city will depend on you."

"I will not fail you," Menicus again seriously vowed.

Alexander lightly smiled, pleased, and then asked Theocles, "Theocles, the temple of Gaia needs an archpriest. Are you interested?"

Theocles body visibly shook and his eyes widened in glee.

Plop.

The man then immediately prostrated himself before Alexander and cried, "It would be my life's utmost honor, my lord, my savior."

"Haha, good, good. Then I will rely on you to spread the faith of Gaia," Alexander grinned in glee.

"Yes, I swear to bring salvation to all the lost lambs," Theocles zealously declared.

"Um, we will discuss the details later. For now please sit down," Alexander gestured, while internally he wondered if Theocles might be a bit too enthusiastic.

Only time would reveal that, but for now, Alexander decided to move on to his next candidate.

"Heliptos, you will be in charge of the coin and it will be your job to oversee the economy." Alexander made a controversial appointment.

Giving the greedy mercenary the responsibility to oversee the state's money might sound like asking the fox to guard the chicken but Alexander saw it differently.

He saw it like giving money to a miser, who will think thrice before spending a single coin.

And given the current situation of the economy, Alexander needed such a penny-pincher.

Also, Heliptos was realistically the only man for the job.

Because according to Heliptos himself, he was once a peddler, who made his fortunes supplying goods for Damious and his mercenary company.

But after a few unfortunate incidents he had gone bankrupt and so, using Damious's goodwill, he joined the mercenary group to escape his creditors.

Though here he claimed that his entire incident was orchestrated by Damious and a few corrupt officials in his city-state because they were jealous of his wealth.

Alexander of course had no way to judge the veracity of this information but decided to take it at face value nonetheless.

Actions spoke louder than words and if it was all true, then there would be no problem.

But if he lied, if Alexander found Heliptos to be incompetent or corrupt, he would simply sack him.

Hearing Alexander's appointed Heliptos produced a huge grin and his eyes lit up in glee, making Alexander wonder if he could see illusory dollar signs in his eyes.

"Thank you, pasha. I will guard the vault with all my life!" Heliptos said giving a military salute.

"Umm, remember your job will be hard," Alexander decided to put some pressure on the over-enthusiastic mercenary.

"You will have to oversee the tax collection, enact policies to attract businessmen, find ways to boost the economy, work out trade deals with various third parties, and many more." Alexander gave Heliptos a list of things he was expected to do.

"That...." Hearing what the actual job entailed made Heliptos stammer a bit as he didn't know half the things Alexander asked him to do.

In fact, he didn't even understand half of what Alexander had said.

'What does 'enact policies to attract businessmen,' and 'boosting the economy' mean?' Heliptos asked himself.

Alexander understood these were all brand-new concepts to everyone in the world and seeing Heliptos look at him dazed and confused, he reassured the man, "Don't worry, I will teach you what to do. All you need to do is follow my instructions."

This produced a happy smile on the man and Heliptos thanked Alexander for his troubles, overall very happy at being offered his dream job.

Alexander then addressed three men, "Menes, Melodias, and Grahtos, all of you will be in charge of the military. You will be our bulwark against all external threats."

"Yes! Pasha Alexander," The three men cried in unison, extremely glad that they would not have to dip their toes in civilian matters but instead could continue to do the things they were the best at.

There was also the selfish reasoning that it was far easier to accumulate merit in the military than in the civilian sector.

"Um, remember we have four thousand mercenaries and thousand Cantagenan soldiers. That means we need to recruit three hundred more," Alexander reminded.

A legion was after all five thousand three hundred soldiers strong with seventeen hundred servants.

The servants could be taken from the recently freed Cantagenan slaves, but currently, there was a small deficiency in the number of soldiers in the unit.

"Hmm, some of the Adhanians who came with us fought pretty well in the last battle. How about them?" Menes asked for Alexander's consent.

"Good, then I will leave the recruitment up to you," Alexander easily handed over the job to his general, adding, "Prioritize those that were officers."

After getting an affirmative nod from Menes, Alexander turned to Grahtos, "Captain Grahtos please take your best five hundred cavalries to be in the army and change the others into infantrymen."

"As you command, pasha," Grahtos easily accepted.

Alexander then at last turned to the three new men that were invited to join this meeting for the first time.

These were the representatives of the various artisans and normally civilians like them would never be allowed a seat at the conference between a noble and his retinue.

But Alexander was no normal noble and thus this meeting fell upon them.

"Blacksmith Harun, I heard the mines around the Zanzan are very rich in ore. And I want you to be in charge of them!" Alexander made an announcement that shook everybody in the room.

This was a very heavy responsibility and nobody expected Alexander to hand it out to a relatively unknown person.

Even the man being offered the job was flabbergasted and attempted to turn it down, "My...my lord, ...I...I'm not confident that I'm....not the man for the job."

The artisan was so overwhelmed that he was having trouble forming coherent speech.

But this time, Alexander didn't need to convince the man as soon the characteristic gruff cough echoed across the room

"Ahem, since the pasha has chosen you, accept it. The pasha has a good eye for people," Menicus addressed Harun.

And as soon as this senior veteran expressed his explicit support, the other military leaders also voiced their assent to Harun's position.

"Haha, Brother Harun, you used to oversee the mines of Adhan too. Only you can do this," From the side, Harun's colleague, a tanner named Krishok too expressed his support.

And thus the blacksmith was ushered into his new role.

"Lord...lord Pasha, this lowly ..this blacksmith will spare no effort to keep the mines going," Harun still couldn't believe that this huge pie had fallen out of the sky and directly into his waiting hand.

When Alexander had called them to attend the meeting, they reasoned that it would be to issue them some new projects.

But who knew it would be to make him oversee the mines, the most important sector of a country after agriculture.

Although Harun had experience in running mines, such a critical sector was usually kept close to a noble's heart and not given to any random person, no matter the qualifications.

Not to mention even skimming off a tiny portion of the mined ores or the slaves' food would make one rich, filthy rich, but some of these mines were gold and silver mines too, meaning Alexander had put the man literally in charge of a money printing machine.

And this fact was not lost on anyone as Harun distinctly could feel the jealous gazes of his colleague, even Krishok's, for this grand prize.

But strangely, for Harun, these gazes didn't seem to offend him.

He would have felt jealous too if one of the other two were to be chosen.

Instead, he felt proud to get such gazes as it only made the reality even more pronounced, a validation that it was all real and not one of Harun's delusion.

Harun looked at Alexander full of smiles and infinite gratitude in his eyes, while the latter sang in his heart, 'Haha, nothing in this world is free my man. nothing in this world is free.'

This was because he planned to make Harun work to the bones to pay for his promotion.

Chapter 188 Mine Management

The claim that Harun had overseen the mines in Adhan was a bit of a misnomer as although he did do all the work, it was under a noble, who took all the glory.

This was one of the reasons behind Alexander's decision to choose Harun as coupled with the man's vast experience, he was also clean, and unconnected to any nobility.

This was a crucial factor for Alexander as he had enormous, super projects in mind, particularly the blast furnace, and secrecy regarding them was paramount.

Thus he needed a man who was both competent and reliable to spearhead them and Harun seemed to fit the bill.

A second reason for choosing Harun was because he hoped that this would encourage others to work even harder, using Harun's status as a precedent to set their goals as they desperately worked to emulate him.

"Mister Harun, I will leave the mines to you. Work hard and soon Adhania will have a new shordar (baron)." Alexander's enticement drew another round of flattery and puffery.

His declaration of the possibility that even Harun could become a noble also made others understand something very important.

They understood that even civilians would be appreciated by the new lord as long as they could prove their worth.

This lit a flame of ambition in the hearts of the other two artisans, while the tiny dissatisfaction held by some of the military commanders for being moved to civilian matters was wiped away.

Alexander then turned to Harun and like the others proceeded to give him some advice, "Mister Harun, your job will be the supervision and maintenance of the smooth operation of the mines. Primarily this will involve overseeing the slaves and ensuring..."

"Rest assured, Pasha, I will get those slaves to complete their daily quotas no matter what." Harun quickly added himself to Alexander's sentence, thinking himself to be very clever.

"No, you won't," But Alexander's rebuttal immediately shattered this thought.

Harun went a bit wide-eyed and his mouth gaped by a small amount at Alexander's curt dismissal and for a while, he didn't know what to say.

'Don't all nobles want their mines to produce more things?' Harun was visibly confused.

Alexander then helped the man rectify his mistake, "Those slaves have been promised freedom and land after five years of service. And I want to give them that. So, I don't want any deaths," Alexander warned.

"That...as you wish." Harun obediently nodded though he was no less confused than before.

Even the military commanders were confused as they heard of no land gifting before.

Seeing this Alexander elucidated, "I know that you are all used to driving slaves to death. But this is not how we do things in Zanzan. In Zanzan slaves will have a lot of the rights that a freedman has."

"Pasha, what rights are you thinking about?" This question was asked by the most appropriate person in the room, Menes, who was a slave once, as was Alexander.

Hence he was interested to know how a fellow sufferer wished to reduce the hardship of people once like him.

"I will give you the details later, but basically a slave will have to be given adequate food, cloth, and rest to sustain himself. Slave masters will be fined if they are found to have beaten or killed their slaves without cause and in serious cases, such as torturing slaves for entertainment, they can even be imprisoned." Alexander laid out some very 'harsh' conditions.

At least harsh in the people's eyes, because in their worldview. what Alexander was proposing was akin to threatening to punish them for destroying their furniture.

The modern equivalent of such an order would be like the government threatening to prosecute someone if he is careless with his cell phone.

Utterly absurd.

But all the people here were aware of Alexander's past and coupled with likely Menes's support, there saw no point in objecting to the decree.

Save one.

Harun.

Although the man did not outright object to Alexander's plan, the man didn't have the guts to, he told Alexander about the problems of such an order, "Pasha Alexander, the mines are inherently a dangerous place to work in, There are frequent cave-ins, the heat is sometimes blistering and injury from falling rocks and debris are common and expected. I'm afraid some slaves will die no matter what."

"I'm not blind to reality. I just want you to do your level best to ensure the safety of as many as you can. As long as you are not found to be negligent of your duty, there will be no blame on you," Alexander gestured using palms to reassure the man.

Mines were a dangerous place to work even in the twentieth century, with heat, dust, and cave-ins an everyday occurrence.

So, in such backward times, deaths were part and parcel of the mining trade.

Alexander's frank flexibility relieved Harun and he was becoming very pleased with his new boss, who was generous and understanding, not at all like the boorish snobs he had been forced to serve before.

'I made the best decision of my life coming to Zanzan,' Harun remarked in his.

While many shared Harun's relief towards Alexander's flexibility, there was one thing that Alexander said that bothered someone.

Heliptos asked Alexander, "Pasha, are we really going to give land to slaves?"

To him, this seemed the pinnacle of foolishness.

But Heliptos was Heliptos and not Alexander because he thought like that.

So, first Alexander corrected him, "No slave will be given land. The land will be given to those freedmen that are the citizens of Zanzan."

Then Alexander explained, "The reason for this is simple. Because men work far harder when there is a reward at the end, rather than to escape the lashing of a whip."

Alexander turned to gaze directly at the people sitting around the table and then asked, "Tell me, which motivates you more, 'Me threatening you and your family with death if you don't win the next war.' or 'Me promising you land and riches if you win the next war'?"

The answer was obvious and everyone's faces lit up in enlightenment when Alexander presented them with such a clear example.

Alexander himself found this out during his high school years when he realized that he would study really hard if his parents promised him a reward like a vacation or a new game if he did well, as compared to just avoid getting scolded.

"The pasha is sagacious," Harun said with a heavy breath, somber and serious.

This example by Alexander resonated especially deeply within him as similar to the slaves, Alexander had promised him a reward too, a title. if he worked hard enough.

Also as a blacksmith and a mine overseer, he could appreciate more than anyone how much different a willing slave was from a disobedient or lazy one.

And he believed with Alexander's enticement of not just freedom but also land, these slaves would be glad twice as hard and still feel nothing.

'I too need to work hard,' Harun reminded himself.

And then Harun suddenly remembered something important.

"Pasha, where will I get my men?" He asked as the mines were currently empty, with zero production.

"Within the next week, I will transfer ten of the twenty thousand slaves that are farming the fields to the mines. You will get them then," Alexander promised.

And then turned to Menicus to ask, "Will that be a problem?"

"No problem. The legumes and oats can be planted in time by the ten thousand alone," Menicus assured Alexander.

"Good." Alexander nodded pleased.

And then further instructed Harun, "All slaves must be fed three times a day, morning, noon, and night. And any injured slave is to be moved immediately to the medical clinic that I will set up there."

He added, "Also all slaves will be required to wear helmets, and leg and arm greaves and must cover their faces when they work. We have a lot of surplus military gear in the barracks, so I will have some of them transferred." Alexander finished.

He had scavenged a lot of spare equipment off of Amenheraft's defeated forces which he had bought to Zanzan as an emergency reserve and now decided to use some of them elsewhere.

"As you command," Harun did not object to Alexander's instructions.

In his mind, since the pasha had said they needed it, then they needed it.

The reason for the helmet was obvious and the cloth was intended to reduce the damage to the lungs from all the dust over the years, the results would bear testament to the sagacious move.

The mines operated by Alexander would have the record of being very productive but also being relatively safe, an almost paradoxical combination in many's eyes.

Done with securing his ore supply, for now, Alexander switched to the next topic of the day, construction.

"How goes the kilns and brick making?" Alexander asked the man left to Harun, who was thin and tall with no facial hair- Jazum.

Chapter 189 Brick And Cement Kilns

Alexander had given the schematics of brick and cement-making kilns to the stonemasons during the first week of this landing.

And they had been at it for a week, entering the city far before Alexander had decided to move in himself.

Now, with seven days past, Alexander was eager to know about their progress.

"We have finished building twenty of the two brick-making kilns and can start production any time," Jazum reported.

"And we are using the blacksmith forge to make the cement kiln. It should be done within the week." He assured.

"Good, good, keep up the good work," Alexander was very pleased by the reported progress, evidenced by his saying the word 'good' three times in a sentence.

The task set to them was no easy feat.

They were instructed to make three types of kilns and make as many as they could.

The first two were brickmaking kilns, with one being used to dry the raw, wet, brick-shaped clay, which operated at around 100 degrees Celsius, and the other was used for the actual firing of the bricks which could reach as much as 1000 degrees Celsius.

These kilns had been designed by Alexander while on the ship and from the outside looked like rectangular houses on raised platforms.

The first kiln used for drying the bricks looked like a house having only its sides and roof with both the front and back open.

Green bricks would be put into his 'house' carpeted with hay and various kindling like sawdust, logs, crushed and chipped wood, then be lit alight, slowly cooking the bricks.

This burning would continue for a day or two depending on the clay and moisture content. with the temperature being between one hundred (100) to two hundred (200) degrees Celsius.

Alexander had intentionally made the kiln very open and prone to heat loss to achieve this low temperature, as too high a temperature would crack the raw bricks.

This would happen because, at too high a temperature, the water around the surface of the bricks would evaporate too quickly and cause the surface layer to shrink, while the inner layer would remain the same volume, and will resist the shrinkage, thus cracking the outer surface and disintegrating the brick.

The second brick kiln, to be used for firing, was like a huge dome, standing on a raised platform.

The platforms were hollowed in the middle and top and thus allowed air to pass in and out of the chamber above it through small porous holes in the floor.

The bricks would be put into the kiln from the top along with all the necessary kindling, like the previous kiln, and then closed with a heavy bronze top to reduce heat loss.

Periodically the top would be opened to add more kindling.

This firing process would also continue for one to two days at around a thousand degrees (1000) and once firing was complete, the bricks would be further allowed to cool inside the kiln for at least a day.

In this way, a batch of bricks, numbering around a hundred could be made in three-five days.

The third kiln was a bit more special as it need to reach fifteen hundred degree celsius to achieve its purpose.

It was to be used to make cement and the chemical reaction that produces concrete would occur only at around temperature.

But the problem was that the temperature using firewood and normal kindling could only achieve around a thousand degrees.

To overcome this, a blower or a bellows had to be used, which blew fresh oxygen into the fuel and increased the burning rate enough to reach those temperatures.

And so Alexander had to design a brand new kind of kiln to do this, a design he came up with in his head after years.

His first innovation was the material to be used.

Usually, kilns were made of mud and earth, which were fantastic refractory materials and highly resistant to high temperatures.

But they had two very big drawbacks.

First, they lacked the structural integrity to reach large heights, usually capping out at six to seven meters.

The way to overcome this would be to use a reinforcing material, but there was no appropriate material to be found.

Such long iron rods existed only in the realms of fantasy and wood would decompose and break down in the extreme heat of the kiln.

The second drawback was it took very long to make a mud kiln.

A simple brick took Alexander five days to make, and so the time needed to dry, fire, and cool a ten-meter kiln could be imagined.

So, here Alexander decided to use his first innovation, making the kiln out of stone.

And astonishingly, the mortar that he used to bind the stone was cement, the very thing he was trying to make, which he got using the blacksmith's forge.

He did this by getting sand, crushed limestone, and clay and mixing them into appropriate proportions (around 1:3:1 respectively).

Then he put this slurry inside the forge, heating the raw materials using the blowers for twenty to thirty minutes.

This made an intermediate product called clinkers which looked like small pebbles, which was then mixed with three-four percent gypsum, which was a white, naturally occurring mineral, and ground into a fine powder.

And thus, the world's first portland cement was manufactured.

The only drawback to this manufacturing was the very small scale of it and thus the need for a large-scale kiln.

Alexander's second innovation regarding the cement kiln was the design of the kiln itself.

Unlike the usual dome shape, it was conical, with a vertical height of twelve meters and a diameter of four meters at the base and one meter at the top, with the charge (raw materials) coming from the top.

The reason for this design change was due to his third innovation, the position of the firing chamber.

While conventional wisdom dictated that the fire should be placed at the bottom, he placed the heart of the kiln at the sides, as it beat furiously with fire and flame, as if wanting to devour the whole structure.

The fuel chamber was six meters high and protruded one meter into the kiln, thus the necessity of making the structure conical as otherwise the raw materials might fall directly into the fire and extinguish it.

Alexander's fourth innovation was the design of the fuel chamber.

The fuel chambers had an upper opening through which firewood and kindling would be constantly fed into the burning inferno.

But they also had three large concrete pipes protruding out of them and each of them was vital to the kiln's function.

Two pipes growing off the sides were the air vents.

They had huge blowers, about the size of a man attached to them that would constantly throw fresh oxygen into the fiery flame, spurring it to burn even brighter.

The last pipe was situated at the bottom of the chamber and this was the waste pipe, through which the ash that would accumulate at the feet of the fuel chamber could be easily removed.

And Alexander's last innovation was the design of the lower floor.

Instead of being flat, it was curved, almost spherical in shape, causing anything on it to slide off it.

This was done to facilitate the exit of the finished product as the kiln was designed like that.

The way it would work was that it would be first fully filled up with the charge and the fires would be lit, allowing the gases to slowly rise up through the charge, depositing their heat to the raw materials and allowing a number of reactions to occur at different temperatures.

In this way, the raw material would change from a slurry-like mixture into small chunks in a step-by-step process and then would smoothly roll off the curved surface, exiting the kiln through the large holes at back and front of the kiln and into the waiting horse cart outside.

Once outside, these clinkers would be taken to a different location, mixed with gypsum, and then manually crushed by large hammers to make the all-elusive concrete.

And the main bottleneck that was preventing Alexander from getting his hands on this magical powder, according to Jazum, was the manufacturing of the blowers.

They had never made such huge blowers, which were to be made out of bronze and leather, and it was taking some time to process the necessary amount of leather to make them.

"I truly apologize for the delay," This was said by Krishok, who as the lead tanner was mainly responsible for processing the hide.

"It's okay, I don't mind," Alexander lightly smiled and reassured the flustered bald man, adding, "Take your time and make sure the thing is sturdy. It will be a pain to replace it frequently."

"Yes, lord Pasha. I'm confident that the finished product will please you," Krishok was eager to please Alexander and snatch a noble title for himself.

All in all, Alexander was very pleased that his trump card would soon be ready.

Chapter 190 Internal Challenges

The next half an hour of the meeting went by with Jazum explaining to Alexander the various operational and situational challenges he was facing, while Alexander gave them some of his own input.

These nuggets of insight made the artisans feel their eyes had been opened and they began to feel that Alexander might not be the divine son of Gaia, but the divine son of Azeyma, the god of metal, iron, and craftsmanship.

They had already been astounded by the magical powder called cement and its ability to seamlessly bind anything to it and now this expertise by Alexander helped to 'cement' this thought even more.

But for Alexander, the questions asked by these people were just elementary questions, mainly concerned about the proper setting of the cement, something Alexander believed these men would be able to answer themselves in a couple of months.

As they had never done this before, naturally, they were unsure about how to treat the structure made using this material, particularly about how long to water the structure, something Alexander as a materials engineer knew very well and recited to them from his heart.

Done with this little troubleshooting, Alexander nodded understandingly to Jazum and said, "Prioritize the cement kilns. Once we have that everything can start. And use any leftover cement to make more and more brick kilns. Ten is too small."

The brick kilns were also made with stone and cement as mud kilns would take too long, and the twenty brick kilns (two were needed per batch) that Jazum constructed meant a maximum weekly production of only twenty thousand bricks, which came to a daily production of around three thousand bricks.

This was nothing, as for context, a four-walled room of 3 meters by 3 meters would need eighteen hundred bricks (1800) and could be done in a day by four men.

"Pasha, I can do a lot more if I have more men. The few thousand under me is barely enough." Jazum pleaded to relieve the labor shortage.

The people assigned to Jazum were all already occupied with their own jobs, making bricks, hauling sand from the nearby beaches, crushing limestone, and cleaning the dug clay from all types of rocks, roots, and stones. thus leaving Jazum with almost no spare manpower to expand his operations.

Alexander understood the chronic manpower the stonemason faced and assented to his request, "In a month winter will settle in and the peasants will have nothing to do. I will assign all of them to you for two months."

"Thank you, my lord, thank you," Jazum was ecstatic at this new injection of labor.

Although two months was a bit too short for his liking, but still Jazum believed in his mind that with this new manpower, he would be able to prove himself more useful to Alexander and thus snatch himself a noble title.

And if Jazum would prove himself worthy, Alexander would have no problem giving him land and rank.

He had plans to improve his infrastructure by a thousand years through various huge mega-projects and he knew that this cement was his trump card to achieve this.

Thus anyone that could boost its production would gain Alexander's favor.

But what Jaazum was unaware of was that just hard work alone would not be enough for him to get much far along the road.

Loyalty to Alexander was paramount too.

And this was, even more, the case for something as revolutionary as cement.

And for that reason, Alexander had decided to keep its manufacturing method strictly confidential.

Every day Alexander would make the raw slurry using his trusted slaves and servants and then send it to the blacksmiths by horse-cart.

In this way, although the blacksmiths knew the ingredients of the powder, as Alexander would task them with collecting them, they didn't know of the proper composition.

In addition, once the clinkers were formed, they would be moved to a secured location and as far as the blacksmiths were concerned be crushed to powder.

They were kept unaware of the addition of the gypsum or its percentage, as this was procured and stored by oblivious slaves who thought they were just crushing and mixing ordinary rocks with white rocks.

Although gypsum was only a small percentage of the cement, it was critical to the manufacturing process, as it was this mineral that made cement into cement.

Without it, the cement would immediately harden once mixed with water and make the whole thing pretty useless.

Consequently, by controlling the amount of gypsum in the cement, one could control the setting time of the cement, and thus vary many of the properties of the cement.

Alexander had given Camius instructions to strictly secure the formulae for the cement and to make sure none of the slaves ever met any of the artisans.

Of course, Alexander was very much aware that such a secret would be impossible to keep hidden for too long, especially when he intended to mass produce the stuff by employing a few thousand or ten thousand staff.

But he would damn well try.

With the promise that the cement production would begin in a week and brick production set to ramp up, happy Alexander decided to ask them about the construction projects on which he would use these materials.

"Have you made blueprints about the things I asked?" He asked the next to last person in the room, a man who had kept himself quiet till now, Uzak.

The buff, bald man who was another expert stonemason hastily endeavored to answer Alexander, "The sewage system design is done. We just need the materials. Same with the aqueducts. And we can start on the roads but we don't have the men."

The chronic shortage of men was a constant headache for Alexander.

The twenty thousand slaves that he had bought from Pasha Farzah were scheduled to arrive in late January, almost three months from now and so for now he would have to make do with what he got.

"Where are we using our men?" Alexander asked with a small frown, hoping to find a way to scrap something up from the bottom of the barrel.

"The twenty thousand are in the field, some are in the military, some with Jazum, and many are in the quarry, while the rest are cutting trees and preparing the wood for the houses you ordered. There's no more," Came the quick answer, a trace of helplessness attached to it.

"Hmmm, what about the women and children? What are they doing?" Alexander asked, stroking his chin and thinking he might have found a way.

"That....they are at home," Uzak slowly spelled out the obvious, unsure why Alexander was asking about this.

"Then take them to make the roads. We are giving them two meals a day anyway, so what are they doing idling at home?" Alexander gave the order.

"That..." Uzak was a bit uncomfortable employing women in men's work.

But facing the harsh reality, he knew he had to accept, "As you command, Pasha."

Alexander's roads were nothing like the men had ever built.

All roads in Adhania were just dirt roads that had been hammered into a flat, compact shape.

But Alexander's roads were magnitudes more complex.

First, he instructed a wide area to be cleared of any vegetation and to remove the topsoil until a solid soil base was found.

Then markings using wooden planks were to be placed along the curb to mark the chosen width of the road

Next, large stones would be placed between the curbs to serve as the foundations of the roads.

On top of them would come a layer of smaller rocks all mixed up with fine aggregates to fill the gaps.

Finally, a layer of concrete would cover everything up, making a smooth, pristine road.

Seeing Uzak's consent, Alexander then advised, "There should be ten to fifteen thousand of them. Have them dig the curbs and fill them as per the blueprints I gave you. Do you have enough stone and gravel??"

This time fortunately the answer was affirmative as Uzak reported, "Yes. Because Zanzan was the main supply hub for the war, it had large stocks of ores and stones in its warehouses, used to construct fortifications on the front lines. Juzam has also been using them."

Alexander had chosen Zanzan because of its mines and thus this news wasn't too surprising to him.

But he knew that the stocks would not last forever, especially as construction was scheduled to ramp up very soon, and thus instructed, "Hmm, okay. Uzak, you are to oversee the quarries' stone production and make sure they can keep up with demand. We will need very much very soon."

"Yes, my lord," Uzak saluted.

Then Alexander returned to Harun, "Harun, you are to assign nine thousand to the limestone mine and the rest to the iron mine. Also, you are to map all the different ore deposits in the area."

"As you wish, Pasha," Harun followed the same gesture as Uzak.

And at last, Alexander greeted the last person in the room, the carpenter- Diaogosis