www.panteon.games

GAME DEVELOPER

STRATEGY GAME DEMO

HELLO!

At this stage of the interview, you are going to do a small project. The reason behind the project is to show a demo of daily tasks at Panteon to you. Also, it will let us observe and understand your competence and ability on developing games. You can find project details and instructions below.

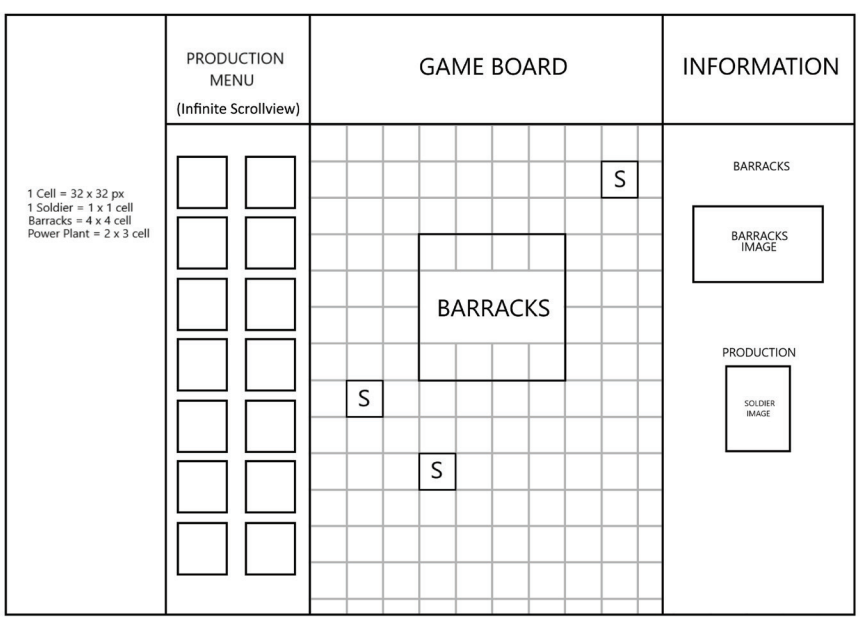
GENERAL INFORMATION

You are responsible for designing a 2D game with Unity 2021 LTS which includes some basic features of strategy games like building production, unit production and being able to move units towards desired areas. **A playable windows build should be included in submission.**

1. You have to use all concepts properly which are listed in **“Design”** section while implementing the project.
2. It is expected that there will be various types of buildings and structures besides **"Barracks"**, **"Power Plant"** and **"Soldier Units"**, which are indicated in Production Menu.
3. These buildings can be placed on the map at the suitable locations selected by the user. The user must be informed when there is an inappropriate area. (Eg. such as the red area of the new building.) Also, buildings should have names, images and dimensions.
4. The user should be able to produce as much as he/she wants from the products with no production time (such as barracks, power plants and military units).
5. When the user selects a building in the game board, the image of this building should appear on the information screen. If the selected building is capable of producing units, the images of these products should also be listed.
6. Only barracks can produce units (Soldiers). Since there is not any product defined for Power Plants, production menu will not be needed.
7. Soldiers produced from the barracks must be able to move to the point indicated on the map by using the shortest path (by selecting units with left mouse click then move units with right click) and must wander around the buildings during this journey. There should be a designated spot (aka spawn point) for each barrack where the soldiers will emerge.
8. Barracks will be able to produce 3 types of soldier. All of them should have health points and attack damages.
   All of them will have same hp(10) and have different damages per attack.
   Soldier 1 -> 10 damage
   Soldier 2 -> 5 damage
   Soldier 3 -> 2 damage
9. All buildings should have health point.
   Barracks -> 100 hp
   Powerplant -> 50 hp
10. Selected soldiers will be able to attack with right click on a unit or building.
11. Soldiers and buildings should be destroyed when their hp is 0.
12. Batching and instancing options should be utilized in order to make Draw Call (SetPass Call) count less than 20.
13. It is necessary to make the design also work in different aspect ratios. So the game you designed should run smoothly with whole resolutions.
14. It is important that the code you write is legible, so you should keep that in mind and stick with the standards. (namings, scalability, comments etc.)
15. Your scene structure, game object namings and folder structure are all important. Please note that your project layout will be reviewed along with your code.
16. The project will be examined in detail. For this reason, you should design your project considering all edge cases.

REFERENCE

We would like to inform you that you are entitled all legal usage rights of each product created by you and made available for trial purposes so that we may recognise your capabilities in accordance with the Law on Intellectual and Artistic Works.



INTERFACE

1. **Production Menu:** An **infinite scroll view** that contains a list of buildings that can be produced.
2. **Game Board:** An area where the produced buildings and soldiers displayed.
3. **Information Panel:** The information area, that belongs to the selected units. (building/soldier)

DESIGN

1. OOP
   Polymorphism
   Inheritance
2. S-O-L-I-D
3. Design Patterns
   Factory
   Singleton
   UI and Logic should be separated from each other using techniques like MVC.
4. Draw Call
5. Object Pooling
6. Coroutine
7. Events
   Platform: 2D

UX

1. Infinite Scrollview-----Object Pooling

ALGORITHM

1. Pathfinding (A*)

SAVE & SEND!

You need to share your complete project via BitBucket or Github (send us an email that contains the link to the project – **hr@panteon.games**).

GOOD LUCK AND HAVE FUN!

LEGAL NOTICE

We would like to inform you that you are entitled all legal usage rights of each product created by you and made available for trial purposes so that we may recognise your capabilities in accordance with the Law on Intellectual and Artistic Works. The work and/or code you have created will be reviewed by us exclusively to evaluate your skill sets and will not be used for any other purposes.