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CANDIDATE GAME DEVELOPER

DEMO PROJECT

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 Funrado 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

There are few common rules that apply to all tasks:

1. Your game should be played in portrait mode and should support different aspect ratios.
2. You are expected to use Unity 2021.3.6f.
3. A playable windows build should be included in submission.
4. You can use third party assets for any requirement.
5. Use provided assets where applicable.
6. Main camera perspective is top-down. Feel free to change it whenever needed.
7. Core mechanics cannot be changed. But you can improve other aspects of the game as you like.
8. You should be able to answer all project-related questions.
9. You shouldn't be demotivated if you cannot complete a task. Partial compilation of the tasks will still be in consideration.
10. You should design your level according to show all mechanics you implemented.
11. We strongly suggest you check the given reference game. You can use this game as a reference to anything you do during a task. You can find the link to reference game at the end of this paper.
12. If you can't understand the tasks perfectly, feel free to ask.

TASK 1: PLATFORM

In this task, you are responsible for making a quick game prototype. Your character must be able to move with joystick appears on screen. The goal is to reach the exit gate of the platform.

1. You can use the given joystick asset to make the joystick move.
2. All characters must have their levels written above their head.
3. There should be collectables and if you collect them your level should increase.
4. There should be static enemies that you can interact with by touching your character.

5. If your character touches an enemy who has a higher level than you, the player will lose, and the game should start again.
6. If your character touches an enemy who has a lower level than you, your character destroys the enemy.
7. Your character must have proper animations while running, hitting, and dying. Animations will be given to you.

Extra Points

1. Enemies should patrol around (Move around).
2. Enemies must have field of view. Now, you don't only interact with enemies by touching them but also by getting into this field. This field must be visually shown (Field of view is the red area in front of the enemies that you can check from the reference game. If you enter field of view of an enemy, you die or you kill him according to your level).

TASK 2: DOOR-KEY SYSTEM

In this task, you are responsible for making doors that can only be opened by the right keys.

1. There should be blue and red gates. You must be able to pass through them only if you have the same color key.
2. There should be blue and red keys. You can collect them by touching them with your character. You must be able to collect more than one key at a time. If you use a key, the key must disappear logically and visually if needed (You can't open two gates with the same key). Once a door is unlocked it doesn't require a key anymore.

Extra Points

1. Doors should have an oscillation effect when player passes through them (Check reference game for visualization). After the player passes through a door, the door starts oscillation and stops after a while. (Tip: you can achieve this effect by using hinge joints)

DESIGN EXPECTATIONS

- OOP
Polymorphism
Inheritance
- S-O-L-I-D
- Design Patterns
Singleton
Observer

MVC (MVVM)

- Draw Call Optimization
- Coroutine
- Events

We expect you to write clean and reusable code. Also, all aspects of your project will be considered including your folder organization and your level design.

IMPORTANT LINKS

- **Reference Game Gameplay Video Link:**
https://www.youtube.com/watch?v=VkfU6dRfOo&ab_channel=Funrado
 - **Reference Game GooglePlay Link:**
<https://play.google.com/store/apps/details?id=com.Funrado.CastleEscape&gl=TR>
 - **Joystick Asset Link:**
<https://assetstore.unity.com/packages/tools/input-management/joystick-pack-107631>
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SAVE & SEND!

You are expected to share your project via BitBucket or Github (send us an email that contains the link to the project – umutsahin@funrado.com).

GOOD LUCK AND HAVE FUN!

Feel the Wind Of Fun!