

1. Explain this things below :

- Scene

Scene is a fundamental unity concept that could be used to represent a level or a portion of the game's world. Every scene can contain a different set of environment, terrain, objects, characters, lighting, cameras, UI elements, and any other properties.

- GameObjects

A representation of objects or entities in a unity scene. Can be filled with various components, including scripts, with various behavior and characteristics. GameObjects can be nested with one another.

- Components

Components are various behavioral pieces that can be attached to GameObjects. Using components, users can add behavior to GameObjects and edit its properties.

- Assets

Assets are representations of content that can be used in Unity, such as textures, scripts, 3D models, sprites, audio files, videos or any other file that are supported in Unity.

2. What is Unity Prefabs and Prefabs Variant

Prefabs are reusable GameObjects and all its components and values that can be saved in the project. While Prefabs Variants are a "derived" object from Prefabs that also have inherited properties from Prefabs. Prefabs variant may have its own values and properties and can get overridden values and properties from its parent.

3. Give an explanation of the advantages of using Unity

Unity has cross-platform compatibility, meaning it can be used to make games in PlayStation, PC, WebGL, Android, iOS, or and any other supported platform. Unity also has a bigger community than other game engines, which help developers when encountering problems.

4. Give an explanation of script components in Unity

Script Components are components that can be created by the user itself by code in C# programming language and inject itself to the GameObject that defines how said GameObject should behave and interact in the scene.

5. Explain the difference between FixedUpdate(), Update(), and the LateUpdate() functions!

FixedUpdate() executes the code below it within a set time interval that can be adjusted in the project setting's timestep. While Update() executes the code below it based on each frame. For instance, If the FPS is 60, it will execute it 60 times per second. Lateupdate(), also execute the code below it every frame. But it will only execute after the Update() code is executed.

6. Give an example of GetComponent<...>() function usage!

GetComponent<... >() usually used in the initialization phase of the script to refer to other components within the GameObject.

For example, if we want to refer to a Rigidbody component within the same GameObject as the script, we can use the code snippet below.

```
Rigidbody rb = GetComponent<Rigidbody>();
```

7. Write a code snippet to modify the GameObjects Transform component: Position, Rotation, and Scale!

```
GameObject.transform.position = new Vector3(69f, 69f,69f) ;  
GameObject.transform.eulerAngles = new Vector3(69f, 69f,69f);  
GameObject.transform.localScale = new Vector3(69f, 69f,69f);
```

8. Give an explanation about World Transform and Relative Transform!

World transforms represent the object's position, rotation, and scale relative to the global or world coordinate system within the unity's scene. While relative transforms represent the object's position, rotation, and scale relative to its parent's object's coordinate system.