Simple Game with Unity3D

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Abstract—**Many of people already playing game. To make the game, people can choose one of many game maker. Unity3D is on of game maker software. How to make game with game maker software ? Is it hard to make ? Making the game with Unity3D, just need five basic step.**

Keywords—Unity3D;game

I.   INTRODUCTION

In modern life, game is not something rare in people. Many people already playing the game. The game users vary,from child to old. Many types of games for example adventure games , action games, board games, simulation games, puzzle, and others. The purpose of the game basically to entertain, but many people make games as a passion. To satisfy needs of the games, people need game maker software. Until know , many software that human can use to make a game, from the simple game to the complex game for example Game Maker Studio, RPG Maker, Game Salad, 3D Rad Engine, Unity, and others. How to make the game with that software ? Is it hard or easy to make? In this paper, will be explained how to make simple game with unity.

II.   UNITY 3D

Unity 3D is one of the game maker based cross-platform developed by Unity Technologies. Unity3D can make the game in multiple devices like phone, android, ios, and PC. Many features that can be done by unity , for example audio reverb zone features, particle effect feature, and sky box features.

Scripts are written in C# (recommended), Boo or UnityScript (some peoples mistakenly call it JavaScript) and attached to 3D objects as components. When the developer created a game with Unity, deployment is a cinch. With a couple of clicks, developer can export the game to mobile, desktop and/or web (web currently requires the Unity player app to be installed). If the developer have the right license, they can even deploy to gaming consoles like Xbox, Playstation and Wii.

Unity is not designed to process design and modelling. If want to design , we can use 3D editor like blender or another software. Unity is Flexible and EasyMoving, rotating, dan scaling objects hanya perlu sebaris kode. Same as duplicating, removing, dan changing properties

III.   MAKING SIMPLE GAME WITH UNITY3D

Making simple game with unity, can be done by several steps :

A.   Prepare Assets

Assets is set of object in a unity project. Assets can be image from unity, or image import from other directory in PC, can be script, can be scene , and others. Assets in unity are placed at the bottom by default. The purpose of asset in unity is the collection of objects to make a project in unity.
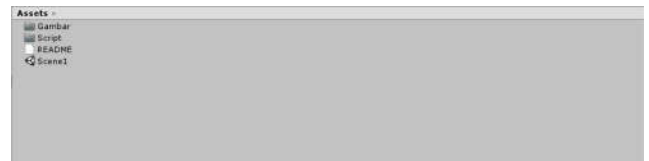
B. Create a Scene

Scene in unity is as the level or as an area where the game object placed. Scene in unity has hierarchy, which will be filled by gameobject. Scene is about how the position of game object will be arranged.
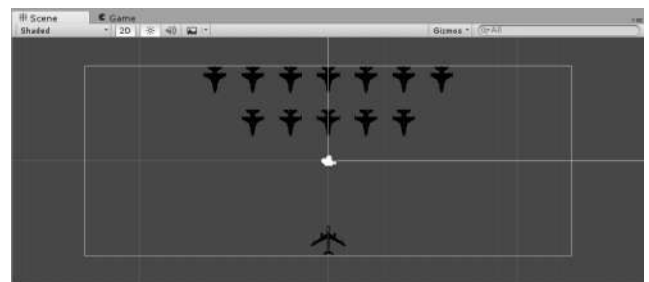
C. Create Game Object

Game object is the object that used to be part of the scene. The example of game object is player character, enemy character, moveable object, not moveable object , and all the stuff that people can see when playing the game. To create game object in unity can be done by tool provided by unity, like 3DObject, 2DObject, light, UI, audio , or camera. Also can be done by drag assets to the area of scene. Dragable assets are image type assets.

D. Set the Components

Component in unity is characteristics of the game object. Each game object has its characteristics or component . The component can be physics component like gravity or collision , can be effect, can be audio , and can be script.The purpose of the component for unity is to make the game object not only be quiet , but can act as we want. To set the components in unity can be done in inspector tab in the right side by default.
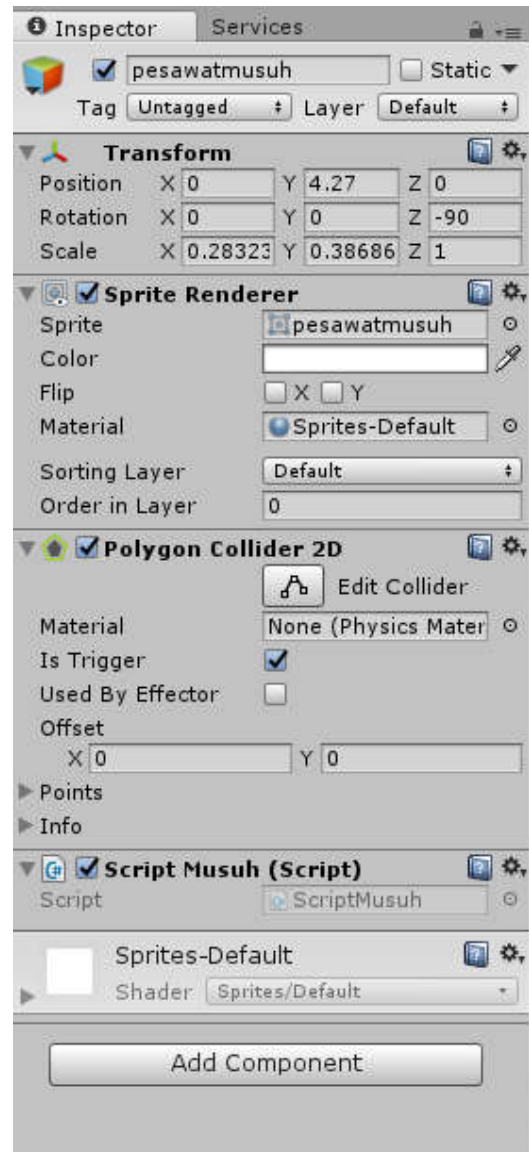
E. Set the Script

Script is the part of assets. Script can be used as component in a gameobject. In the script we can write the algorithm code to the certain game object. The purpose of script in unity is to make the response of the game object when an event happen. Example the gameobject will go forward when we press button 'W'. In unity , there are two procedure by default that is Start() and Update(). The different is for the Start(), the code inside it will run when the game first played , but in the Update(), the code inside it will run repeatedly every frame. In this project the script will be written with C# language.

```csharp
ScriptPesawat

using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.UI;

public class ScriptPesawat : MonoBehaviour {

    public int kecepatan;
    public static int score;
    public static Vector2 posisipesawatsekarang;

    Text infoskor;
            // Use this for initialization
            void Start () {
        infoskor =
GameObject.Find("Skor").GetComponent<Text>();
        score = 0;
        print("Semangat");
            }

            // Update is called once per frame
            void Update () {
        posisipesawatsekarang = transform.position;
        infoskor.text = "Skor : " + score.ToString();
        if (Input.GetKey(KeyCode.D))
        {
            transform.Translate(Vector2.right * kecepatan *
Time.deltaTime);
        }
        else if (Input.GetKey(KeyCode.A))
        {
            transform.Translate(Vector2.right * -kecepatan *
Time.deltaTime);
        }
            }
}
```

CONCLUSION

To make a simple game in unity , can be done by 5 step :
1. Prepare assets
2. Create a scene
3. Create game object
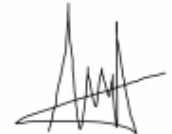4. Set the component
5. Set the script

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