

Introduction to Unity

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Background

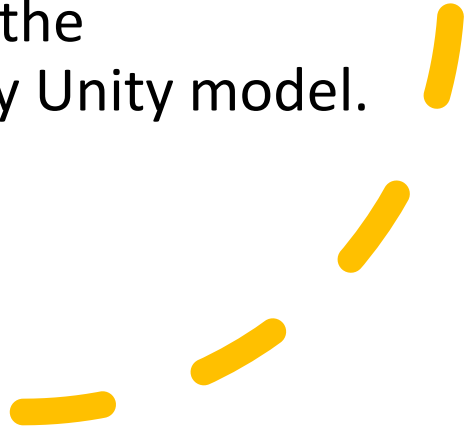
- Cross platform game engine used developed by unity.
- Create immersive 3D experiences for real world applications at scale.
- Majorly used in game development and 3D animations.
- Some Popular games made in unity: Temple run, The long dark, Kerbal space program.
- Popular language used in Unity for Scripting: C#

My Experience with Unity:

- I created a 3D character in Unity which changes its facial expression based on user's command.
- There are total 7 expressions that I covered: Angry, Disgust, Fear, Happy, Sad, Surprise and Neutral.
- I also created 3D game in which you can throw a cube in 3D and set it up back to their original position based on the user's command.
- Used C# for scripting.



Steps to reproduce

- Facial Expression:
 1. Download an open-source 3D character (anime-character) from asset store.
 2. Added that character in my project.
 3. Recorded the different animations using blend shapes in the character.
 4. Designed the flowchart in Base layer of character to control sequence of expressions in grid control.
 5. Developed a C# script to control the expressions and assigned it to my Unity model.
 6. Play the model
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Steps to reproduce

- Throwing a Cube:
 1. Created a project in Unity.
 2. Added a 3D plane in the workspace.
 3. Added a 3D cube on the plane.
 4. Added a render component to introduce physics properties like gravity to cube.
 5. Included this Render component In the script to control the velocity of the cube based on the user's command.
 6. Assigned the script to the cube.
 7. Play the model.



References

- <https://unity.com/>
- [https://en.wikipedia.org/wiki/Unity_\(game_engine\)](https://en.wikipedia.org/wiki/Unity_(game_engine))
- https://www.youtube.com/watch?v=9tMvzrqBUP8&ab_channel=ChargerGames