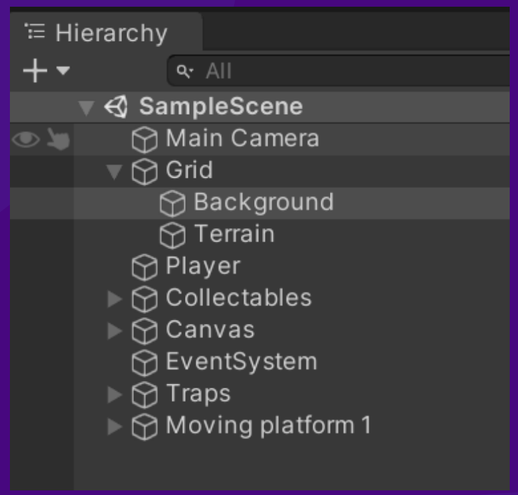

10 THINGS TO KNOW
ABOUT UNITY

1. WHAT IS SCRIPTING IN UNITY?

Concept of coding in Unity

- Scripting tells GameObjects how to behave.
- In Unity, you don't need to create the code that runs the application. The Unity does it for you.
- The Unity runs in a big loop, reading all of the data that's in the game scene. It runs single discrete frames, one after the another.



2. LANGUAGE THAT CAN BE USED IN UNITY

C # (C Sharp)
Object-Oriented Language

S

SCRIPTING LANUGAGE

Unity is compatible with Object-Oriented Language that is used to run the GameObject.

V

VARIABLES

Variables holds values and references to objects. They are like a box that holds something for us to use. Follows the camelCase rules.

F

FUNCTIONS

Functions are collection of code that compare and manipulate these variables. Function starts with an Uppercase letter.

C

CLASSES

Classes are a way to structure code to wrap collections of variables and functions together to create a template that defines the properties of an object.

3. VARIABLES

Declaring the variables

- Visibility Types: public and private
- When you make variables public, they're accessible to other scripts/classes, and can be changed in the inspector from the Unity Editor. So, we should make it private!
- Private variables allow your code to be cleaner, since the value of those variables can only be changed from inside that class. This makes debugging and maintaining the code easier.

VARIABLES

Define what kinds of value is the variable

- Types: number, text, or complex types.
- Naming Convention: variable can not start with number and can not contain any space in between
- Serialization: Using [SerializeField] in the Script allows Unity to store your data/objects for reconstruction. It allows feature like saving and loading.

4. FUNCTIONS

Basics of Functions

- Default Functions: Awake, Start, Update, FixedUpdate, LateUpdate.
- Start is called if a GameObject is active, but only if the component is enabled.
- Update is called once per frame. This is where you put code to define the logic that runs continueously, like Animations, AI, and other parts of the game that have to be constantly updated.
- Functions can do calculations and return a value. There are void type just as like an Object-Oriented Language.

5. CLASSES

CLASSES

CLASSES ARE COLLECTIONS OF THE VARIABLES AND FUNCTIONS.

Class name must match the file name of the C# script for it to work. Otherwise, it will not be accepted in the Unity and won't compile.

UNITY SPECIALTY– SERIALIZATION

It will converted into simple data that Unity can look at in the inspector. It will see that you have the class will appear in the inspector.

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WE DECIDED TO SCRAP OUR INDIVIDUAL ENGINES AND MAKE AN ENGINE TOGETHER, BECAUSE IT'S MORE FUN WHEN THERE'S TWO OF YOU WROKING ON SOMETHING.

David Helgason

6. HISTORY OF UNITY

MAY 21, 2002

Nicholas Francis, a Danish programmer, posted on the Mac OpenGL board asking for assistance with a shader system he was trying to implement into his game engine.

FEW HOURS LATER

Joachim Ante, who lived in Germany at the time, responded to Nicholas' post. Their conversations resulted in the two developers collaborating to create a shader system that would work for both of thier separate engiends.

LATER

David Helgason heard about the project and thought they were "really" onto something, so he jumped aboard as the third developer.

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AT FIRST THEY WANTED TO DEVELOP GAMES FOR A LIVING, BUT SAW THE NEED FOR A BETTER UNDERLINING TECHNOLOGY. THE THREE ENDED UP NOT MAKING THE GAMES, BUT RATHER MAKING A TOOL TO MAKE GAMES.

7. WHO AND WHERE IS UNITY BEING USED?

Usage of Unity

- Unity is a 2D/3D engine and framework that gives you a system for desinging game or app scenes for 2D, 2.5D and 3D.
- Therefore, it was used in a lot of 3D games and 2D games. i.e. Pokemon Go, Healthstone, Rimworld, cuphead, and more.

8. HOW IS UNITY BEING USED?

Usage of Unity

- You go to Asset Store to download the initial set of Game Objects. That includes "Player", "Obstacle/Trap", "background", "Tiles", and "Animation Effect".
- Since the Unity is designed to build the 2D and 3D game, it's easier to switch between 2D game to 3D game, or 3D games to 2D games.

9. ASSET STORE

Explore the Item Store in Unity

ASSET STORE HAS A LOT OF PACKAGES AND ITEMS.

1. EASY ASSESS
2. FREE STUFF
3. UPDATED EVERYDAY
4. MANY USERS
5. VARIETY

CLICK IN THE LINK BELOW

2D Environments & Characters | Unity Asset Store

10. HOW TO PLAY OUR GAMES?

Tutorial on our Game.

OUR OPINION ON UNITY

1. Did you enjoy leanrning/using the language? Why?
2. Do you think the language is useful? Why?
3. Compare the language with Java / C / Python
4. Would you recommend the language?

FURTHUR STUDY

What are some aspects of the language you would be interested in investigating furthur?

REFERENCES

1. https://unity.com/how-to/learning-c-sharp-unity-beginners
2. https://digital.wpi.edu/downloads/2f75r821k
3. https://unity.com
4. https://assetstore.unity.com/2d
5. https://docs.microsoft.com/en-us/archive/msdn-magazine/2014/august/unity-developing-your-first-game-with-unity-and-csharp#:~:text=Unity%20allows%20you%20to%20import,animation%20system%2C%20and%20much%20more.

RESOURCE REFERENCED

Below planets are the resources (links are placed in the planets) we used to prepare our presentation.


GAME
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