Gujarat Technological University

Chandkheda, Ahmedabad

HJD Institute of Technical Education and Research

(Affiliated with GTU)

A Summer Internship Report on

"<u>Game Development(Unity)</u>"

At the industry or company

Thunder Game Development Studio

Under the subject

Summer Internship (3170001)

Computer Science Engineering

Submitted By,

RAYCHURA MEET PARASBHAI
(200850131501)

Academic Year
(2022-2023)

Internal Guide   Head of the Department
Ms. Urmi Gadhavi   **Mr. Vishal Bhimani**

HJD Institute of Technical Education and Research
(Affiliated with GTU)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the Internship at **Thunder Game Development Studio** has been satisfactorily completed by Raychura Meet ParasBhai (200850131501) under my guidance in the fulfillment of the course Summer Internship (3170001) work during the academic year 2022-202

Internal Guide   Head of the Department
Ms. Urmi Gadhavi   **Mr. Vishal Bhimani**

Completion Certificate

Thunder Game Development Studio
(AR/VR/2D/3D Production Company Since 2016)

Date: July 14, 2022
Place: Bhuj, Gujarat

Internship Experience Letter

Whom It May Concern

This is to certify that Mr. Meet Parasbhai Raychura have successfully completed the project at Thunder Game Studio, Bhuj. The duration of project was about 1 month. He has undertaken the project titled "Game Development". The project was developed using Unity Game Engine - C#. We are satisfied with the work he has done and the effort he has put in it.

During his training period he has been found to be diligent, focused and sincere toward his work schedule. His progress during the project work has been appreciable.

He has successfully completed the project work assigned to him. We wish him success in his future endeavours.

Thank you

Authorized Signature

Jigar Pattani

(Co-Founder)
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Bhuj-Kutch

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Acknowledgement

Content

Chapter 1: Introduction

1.1 About the company

- **THUNDER GAME STUDIO** is 2D/3D/AR/VR Game & Interactive Software Development & Designing, Training, and Virtual Reality Studio

- Thunder games believes in a young and dynamic work management philosophy. Our team of designers & developers is young and enthusiastic. We will provide you a classic yet trendy product design, which always looks for the end-user perspective and stay excited to deliver something cool.

1.2 Aim and Objectives of the Internship

- The aim of this internship is to learn How to develop game.

- Objectives of this internship is to learn real-time project workflow and converting client requirement into real life software or website.

Chapter 2: Roles and Responsibilities during internship

2.1 Daily Tasks and Activities

- Making the Game Character.

- Adding the object to the Games(Eemy,Traps,Wall,lift,coin).

- Adding the power to Enemy and the Hero.

- Making the Enemy.

- Adding animations to the GameOjects.

- Adding Sound(SFX) to the Game.

2.2 My Roles and Responsibilities

- Design Own Game(2D) Using The Unity.

2.3 Problems Given

- Making the Lift.

- Make a enemy With Power.

- Make A moving Objects.

- Make The Healthar.

- Adding animations to the GameOjects.

Chapter 3: Skills Learned

3.1 About the Skill's

o **Unity:**

Unity is a cross-platform game engine developed by Unity Technologies, first announced and released in June 2005 at Apple Worldwide Developers Conference as a Mac OS X game engine. The engine has since been gradually extended to support a variety of desktop, mobile, console and virtual reality platforms. It is particularly popular for iOS and Android mobile game development and is considered easy to use for beginner developers and is popular for indie game development.

The engine can be used to create three-dimensional (3D) and two-dimensional (2D) games, as well as interactive simulations and other experiences. The engine has been adopted by industries outside video gaming, such as film, automotive, architecture, engineering, construction, and the United States Armed Forces.

o **C# for Unity:**

The language that's used in Unity is called C# (pronounced C-sharp). All the languages that Unity operates with are object-oriented scripting languages. Like any language, scripting languages have syntax, or parts of speech, and the primary parts are called variables, functions, and classes

o **Functions:**

Scripts manipulate the variables by using functions. There are a number of functions that run automatically inside Unity.

See below:

- Awake
- Start
- Update
- FixedUpdate
- LateUpdate

- **Classes:**

  Classes are collections of these variables and functions.

- **GameObjects:**

  Game Objects are the fundamental objects in Unity that represent characters, props and scenery. They do not accomplish much in themselves but they act as containers for Components, which implement the real functionality.

- **Animation:**

  We can assign animation clips to the animation component and control playback from your script. The animation system in Unity is weight-based and supports Animation Blending, Additive animations, Animation Mixing, Layers and full control over all aspects of playback.

- **Transform:**

  The Transform component determines the Position, Rotation, and Scale of each object in the scene. Every GameObject has a Transform.

- **Sprite Renderer:**

  A Sprite Renderer uses the texture supplied in the Sprite property but uses the Shader and other properties from the Material property. This means you can use the same material to render different Sprites without worrying about what texture is assigned on the material.

3.2 How I Developed my Skills

At first, I started Learning Basic Unity. And after that with the help of guide I started making own 2D game. Step by step I about to know there is more in unity like Camera, Animation & Sound etc So I started learning that by YouTube and there was always support of the guide.

After gaining this much knowledge of Unity I Make my own 2D Game. In that game player(hero) Can move and collect the collatable(Coin and Health) and complete the stages and at last the boss fight.

Chapter 4: Overall Experience

4.1 Technical Experience

By this two weeks internship I have learned about unity and making 2D game in the unity.

4.2 Personal Experience

The employees at Thunder game studio are helpful for any problems and I have learned and gain a lot of knowledge from them.

There was a work friendly environment and a guide/mentor was assisted to us who made sure we learnt something new everyday.
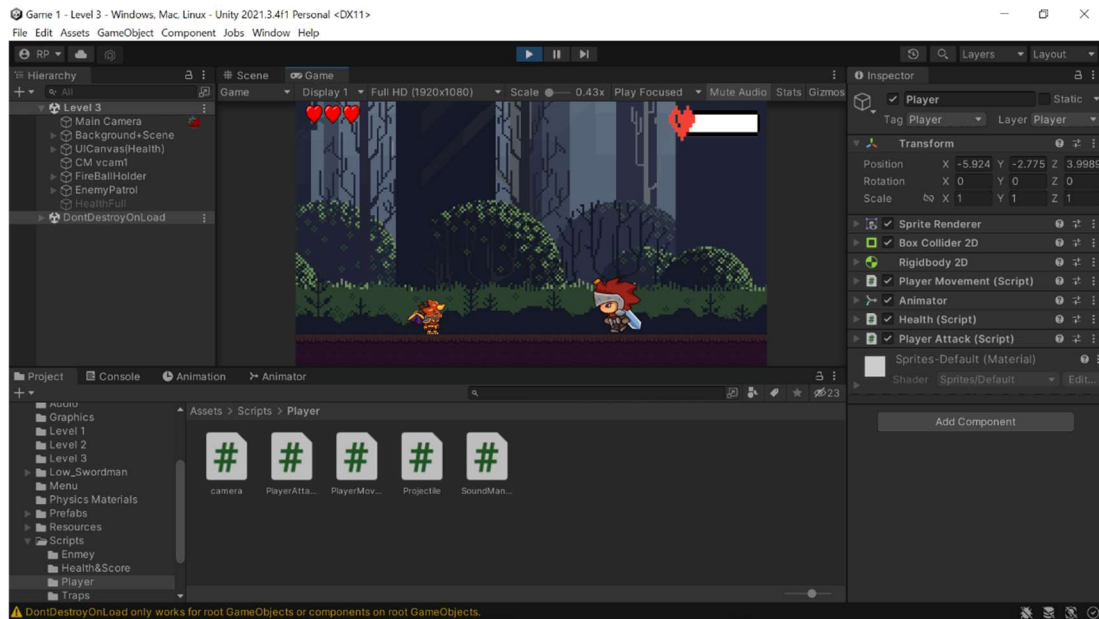
Chapter 5: Conclusion

5.1 What I Build

I Build my own 2Dgame.

Screen shots of my game are Given below:
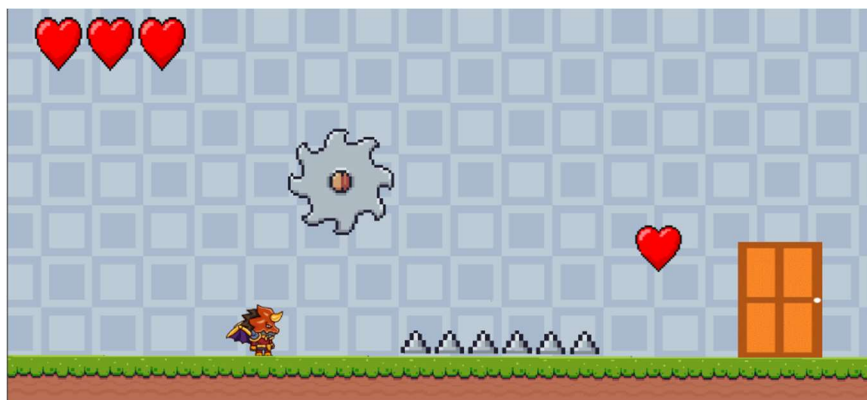
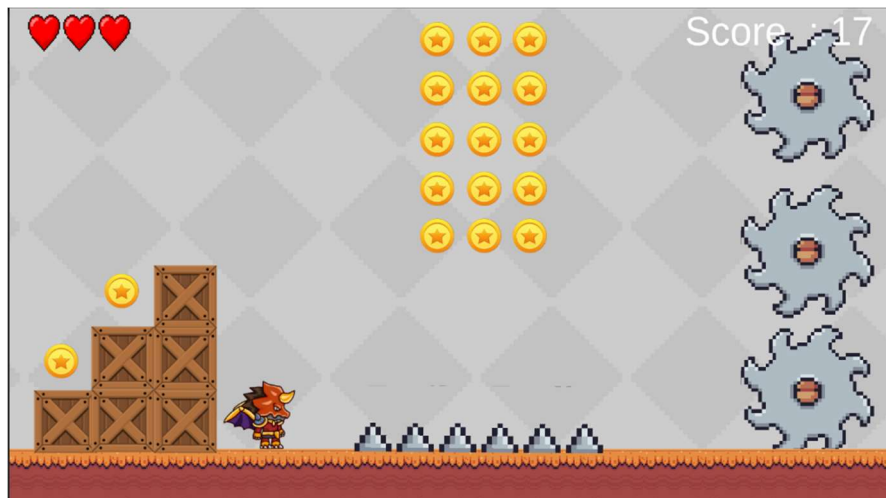1.Unity Overview

2.MainMenu Screen

3.Level 1.

4.Level 1(Door to next Level).

5.Level 2.

6. Level 2(lift).

7. Level 3(Boss Fight).

8.Level 3(Hero Attacking).

9.Level 3(Enemy Attacking).

5.2 Conclusion

So, from this internship I have learned the how to Make 2D game Using Unity from scratch.

Bibliography:

- https://docs.unity3d.com/Manual/index.html

- https://unitycodemonkey.com

- https://assetstore.unity.com

- https://www.voicy.network

- https://themushroomkingdom.net/media/smb/wav

- https://github.com/Brackeys/Health-Bar/tree/master/Health%20Bar

- https://github.com/Brackeys/2D-Shooting/tree/master/2D%20Shooting

- https://assetstore.unity.com/packages/2d/characters/dragon-warrior-free-93896

- https://assetstore.unity.com/packages/2d/characters/knight-sprite-sheet-free-93897

- https://assetstore.unity.com/packages/audio/sound-fx/free-casual-game-sfx-pack-54116