Death Race

By

Muhammad Ali

Muhammad Usama

Hira Tahir

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In partial fulfilment of the requirement for the degree of

BS (CS)

Certificate of Approval

It is certified that the work presented in this Project titled

Death Race

Was submitted by

Muhammad Ali (BSCSF16E004),

Muhammad Usama Shoaib (BSCSF16E054),

Hira Tahir (BSCSF16E033)

Under my supervision and that in my opinion, is fully adequate, in scope and quality, for the degree of BS in Computer Science.

Supervisor:

Miss Maham Khalid
Current visiting at
Department of CS & IT
University of Sargodha

Project Manager:

Mr. Fahad Maqbool
Asst. Professor
Department of Computer Science & Information Technology
University of Sargodha

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Muhammad Ali

Muhammad Usama Shoaib

Hira Tahir

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Chapter 1 : Introduction

1.1. Purpose of document

For our final year group, our group decided to develop an auto racing game designed in unity. We will attempt to develop an easy auto racing game supported basic design patterns. Our group would really like to implement an auto racing Game supported the Android system. We attempt to implement an easy car game supported the essential design. The thing of this game is to survive as long as possible and obtain to the High scores within the shortest possible time while avoiding the obstacles on the tracks. Within the fast growing field of software engineering and development and even sooner growing sector of game development the longer term is tough to predict. We are working with this game as our final year Capstone project and ass a neighborhood of our degree we elect this sort of labor for doing better with development cycle, development period, graphics, scripting, adopting new technology, and animation. Generally, software project may be a project that specialize in creation of software. Consequently, Success are often measured by a taking check out the resulting software. During a game project, the product is game.

1.2. Project Complexity

- The weapons that we will use for cars will be of different designs for different car models, so we have to adjust them to fix on the cars.
- Making the game 3 Dimensional will be a huge task for us.
- The language that we will use for our project is C-Sharp, so we have to learn it properly for avoiding the glitches and bugs.

1.3. Scope and Objectives

- The purpose of the game is not just a simple ordinary car racing, Death racing game also allows the player to race and reach the goal while using guns to fight with enemy cars. It also has a simple car-racing mode, which does not include any enemy cars to fight with. Weapons for cars can be purchased by completing different levels and earning coins.
- Game is available for all kind of android users globally, which can be accessed through the Play Store of android cell phones.
- Our main objective is to use our game as our final year project and later upload it on both Appstore and on Play store as well to make our game globally available for all kind of users worldwide.

Chapter 2 : Feasibilities

2.1. Technical Feasibility

- **Unity: Unity** is a cross-platform game engine developed by Unity Technologies, first announced and released in June 2005 at Apple Inc.'s Worldwide Developers Conference as a Mac OS Xexclusive game engine. As of 2018, the engine had been extended to support quite 25 platforms. The engine are often wont to create three-dimensional, two-dimensional, computer game, and augmented reality games, also as simulations and other experiences. The engine has been adopted by industries outside video gaming, like film, automotive, architecture, engineering and construction. Unity gives users the power to make games and experiences in both 2D and 3D, and therefore the engine offers a primary scripting API in C#, for both the Unity editor within the sort of plugins, and games themselves as drag and drop functionality. Before C# being the first programing language used for the engine, it previously supported Boo, which was removed with the discharge of Unity 5 and a version of JavaScript called Unity Script, which was deprecated in August 2017, after the discharge of Unity 2017.1, in favor of C#. Therefore, we will use Unity as our platform to design our game.
- **C# for game development:** C# is widely used to make games using the Unity game engine, which is that the hottest game engine today. Quite a 3rd of top games are made with Unity, and there are approximately 770 million active users of games created using the Unity engine. Unity is additionally used for VR, with 90% of all Samsung Gear and 53% of all Oculus Rift VR games developed using Unity. C# may be a very fashionable tool for creating these applications, then makes an excellent choice for any programmer hoping to interrupt into the sport development industry, or for anyone curious about computer game

2.2. Time Feasibility

First, we will divide our project into smaller modules like any other project that needs to design and then work on every module. Our estimated time to complete one module is in 15 days minimum. According to our task or module division routine our project will be completed in 4 to 5 months
maximum.

2.3. Cost Feasibility

We will install unity software on our PC's and develop the game through the software so we did not require any budget to handle our project.

2.4. Schedule Feasibility

Time is an important factor. The assessment and evaluation of the completion of a project with the available staff and resources with in time is very essential. This project will be

completed in time all the milestones and documentations will be completed in time and Android Application is ready in project development time.
As all group members are working on the project and paying proper time to their individual task of the project, hopefully, it will be completed in six months.

2.5. Specification Feasibility

- All the requirements and specifications will fulfill.
- We understand requirements in well-defined manner because requirements are presented by a prototype method.

System must have two types of specification feasibility that is as follows

2.5.1. Software

- UNITY for UI, Windows 8 will be used for developing this system.
- Android phone with 6.0 or above android version

2.5.1. Hardware

- Processor**:** 1.0 GHz Pentium 4 Processor or higher is required.
- Memory**:** 4 GB of RAM or higher is required.
- Hard Disk: 3 GB of available space or higher is required.
- Mobile RAM 2 GB+
- Mobile Camera Support AI

Chapter 3 : Justification and Authentication

3.1. Justification

As with any new technology, this project will not always be 100% perfect. The game can have glitches and bugs.

3.2. Authentication

Our project follows the rules and regulations of government. We are not doing any kind of activity that can hurt any person or any property. The project is totally under the laws of Pakistan. If in future we will use this project in market, this responsibility will be ours that any kind of wrong person will not use it.

Chapter 4: System Architecture

4.1. Use Case Diagram of System

In The given figure it shows us the Use Case diagram of our game

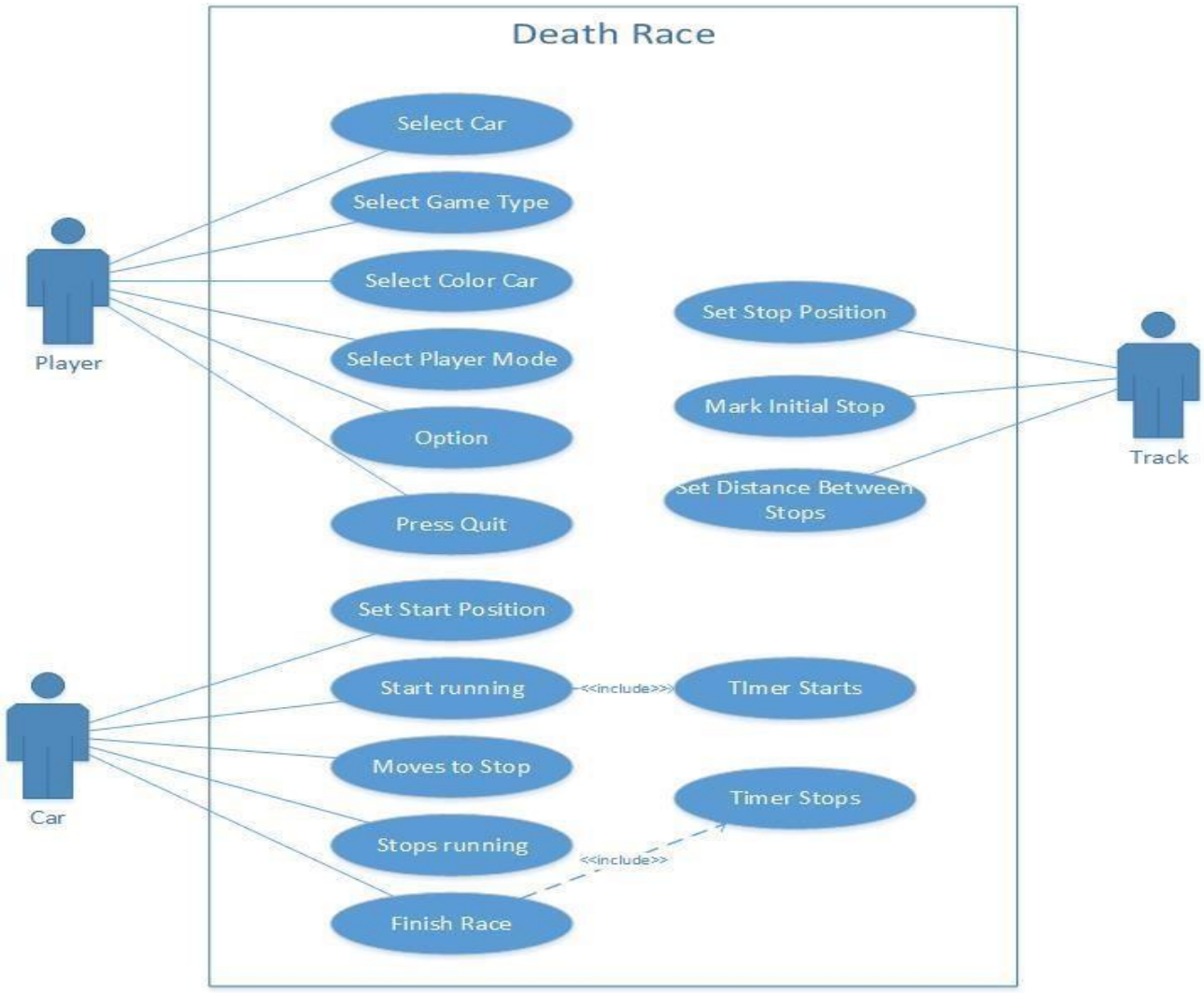

Figure 4.1: Use Case Diagram of System

4.2. Entity Relationship Diagram of System

In The given figure it shows us the ER Diagram of our game

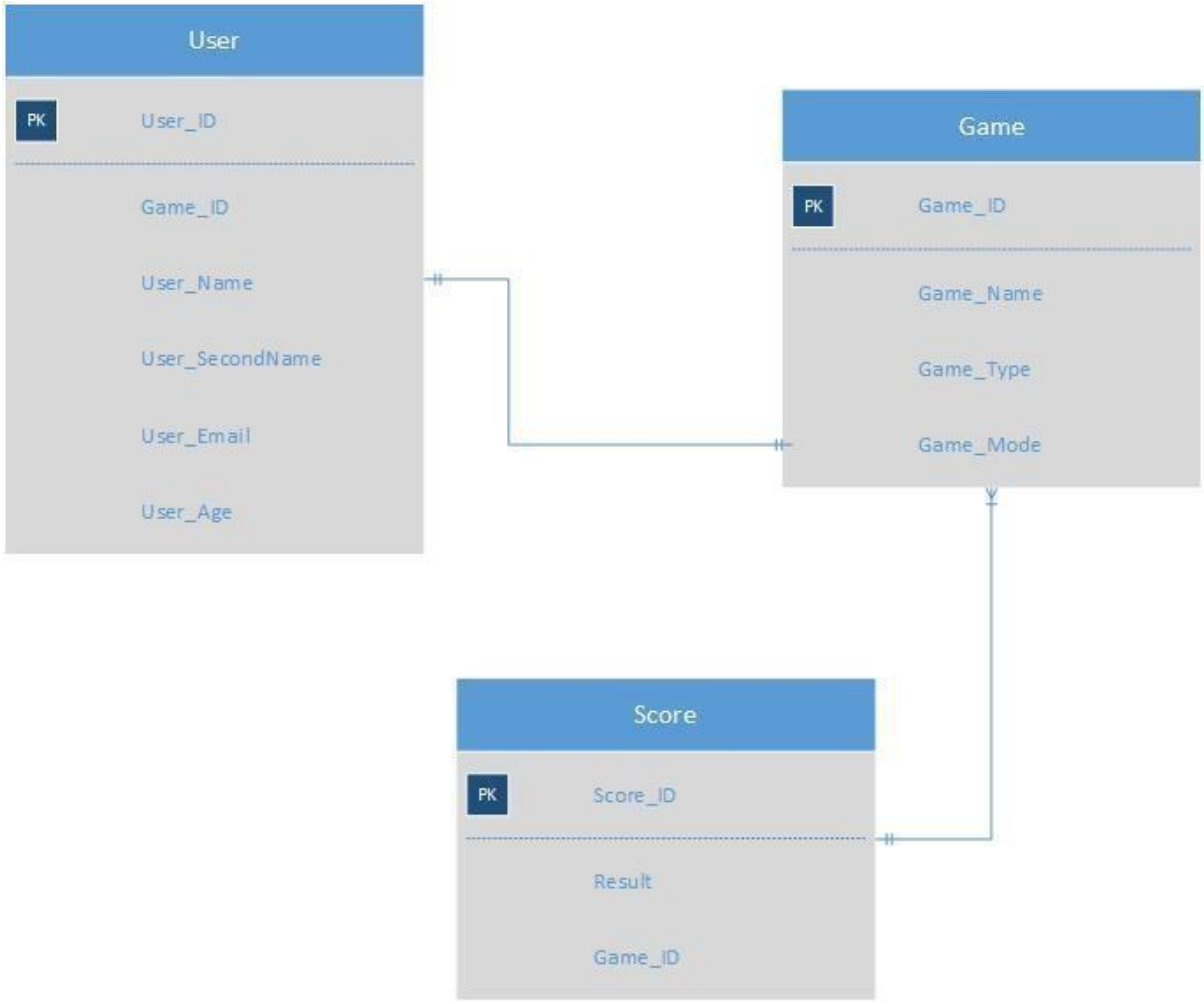

Figure 4.2: ERD of Game

Chapter 5: Project Significant and Size

5.1. Significant

- Car racing games had been very popular over the decades. With different kinds of racing games for mobile, car racing game comes always first with the idea of racing against the opponents.
- Our 3D game has the exact theme like several racing games but it will also give the user to fight with enemies while sitting in the car.
- There are several racing games that copies the theme of the movie ‘’Death Race’’ with different versions.

5.2. Size

- The size of our game will be roundabout to 100 to 150 Mega Bytes, which will be suitable for almost every brand of cell phones.