**Group: - ESS112\_Team4**

**Requirement specification:-**

Disk space is required since installation would take some memory

Some basic system requirements:

1. Higher Python version need to be pre-installed(we will be using Python 3.9.0)
2. Pygame module should be installed after installing python using some commands available on internet
3. Basic Knowledge and Understanding about Python and Pygame Library.

Code Editors: Microsoft Visual Studio, vim editors or ubuntu based (sublime text) are required.

For Sharing code: Git Hub or any other similar platform(like google drive) where everyone can modify the code will be required

We are using Pygame module and some additional modules like random and time for our project.

Pygame is a set of python module that used to design video games and some multimedia apps. It was built on top of excellent SDL library. It can be easily installed on many operating system and easy to use.

Requirements of Pygame -

* Importing and Initializing Pygame
* Pygame surface is used to display any image that we need, which has pre-defined resolution and pixel format.
* Basic Movements, Boundaries and Jumping
* Characters , enemies and animations
* Optimizations and OOP
* Projectiles, Collision Hits
* Scores and other parameters
* Pygame clock is used to control the time that is very much essential to set motion, play a sound that is needed. we count it in milliseconds instead of seconds.
* We use some keys to play a game and Pygame key is an integer id which represents every key on the keyword. (like pygame.KEYDOWN is downward arrow key)
* Pygame also have inbuilt functions for shapes like circle, triangle, square which we will use while building a game.
* Many pictures and are needed.
* Background Music on start, end, collision etc.

**Project Plan**:-

**Objective**: To make a Coding Project in which we will create a Car Racing game

**Languages used**: Python

**Duration of Project**: Project will take 3-4 weeks for completion.

**Project Schedule**:

In the First Week, each team member will learn Pygame library (which we will use for this game development project) by reading the Documentations given in the references section and will watch some tutorial videos to learn basics of Pygame.

In the End of the first week, Each member will be assigned his role in the project and will be given a deadline for his work completion. From Second Week onwards we will start the coding part of the project ~~and some~~ which will require next two weeks and will complete the project some days prior to the deadline.

We will have regular meeting (3-4 times a week) to discuss about the progress in project and project related doubts and queries.

**Team Members**:

* IMT2020096 - Nandula Satya Prasanna Koushik
* IMT2020090 - Balaji Babasaheb Sankapal
* IMT2020082 - Prudhvi Nath Reddy
* IMT2020098 - Jainav Sanghvi

**References:-**

<https://www.javatpoint.com/pygame>

<https://www.pygame.org/wiki/about>

<https://www.geeksforgeeks.org/>

<https://stackoverflow.com/>

<https://realpython.com/pygame-a-primer/>

<https://www.pygame.org/wiki/tutorials>

<https://www.edureka.co/blog/pygame-tutorial#z4>

<https://www.youtube.com/watch?v=FfWpgLFMI7w&t=56s>

<https://www.youtube.com/watch?v=i6xMBig-pP4&list=PLzMcBGfZo4-lp3jAExUCewBfMx3UZFkh5>