ADVANCED PROGRAMMING PROJECT SUBMISSION BY

Group-15
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<u>Source Code</u>

Design & Implementation

☐ Event-Driven Programming & OOP concepts were used such as Polymorphism, Inheritance, Interfaces, Abstraction, Exception Handling etc.

☐ GUI effects via Animations such as Translations, Rotations & Timelines on the Weapons, Orcs & Hero.

☐ Coordinates of different elements have been accessed and updated to change their positions as the game proceeds to give a seamless experience.

☐ The intersect function has been used to check for collisions with various objects & the random function is used to generate different shapes of trees, clouds, islands, orc types and different weapons in the weapon chest each time the user plays the game.

☐ Saving and loading for total coins, moves, and all GameObjects is done by using Serialization & Deserialization with the help of serialisable classes and binary files.

☐ Weapon upgrades have been introduced that increase the damage/features of the corresponding weapon. Also, the boss can endure higher damage and requires more force to get pushed.

Division Of Work

Aryaman Raina (2020034)

- Jumping & Collision of Objects
- Serialization and Deserialization
- Weapon & Coin Chest implementation
- Game Objects Generation
- Play, Pause, Restart and Revive Game
- Weapon Physics and Upgrades
- Bonus implementations

Ashwin R Nair (2020037)

- Main Page & Settings GUI
- Sound Effects & Background Music
- TNT and Floating Islands
- OOP implementations
- Movement of Hero & Orcs
- Coins gathered implementations
- Presentation

Bonus

- The Hero can use a **JetPack** during the game if he has a minimum of 5 coins. This feature allows the hero to hover above the islands & orcs for a limited time, hence escaping the obstacles.

- Various sounds and music are used in this game for an enriching expeirence. The sounds are heard when the hero bounces on the islands and during his forward movement. Different kinds of background music are played at various instances including the Menu Screen & GamePlay Screen.

- The game allows the user to show the information of any saved game, such as coins collected and the moves gathered through an easy to use GUI and allows to load/delete multiple saved games.

- To make the game look better, different combinations of pictures of trees, floating islands and clouds have been used.

- Dedicated Play/Pause Menu Screen and Revive Screens have been designed which brings the gameplay to a complete still and allows the user to choose the necesary options in a friendly manner.