**Requirements Document – Infinity Starship**

1. **Introduction**

1.1Purpose

The purpose of this document is to present the written details of the specifications requirements as a contract for Infinity Starship. Further details for specifications will explain the purpose of its functionalities/features, menus/interfaces, and other hardware/software constraints of the game.

1.2 Scope

Infinity Starship is a vertical 2D shooter game prototype that runs locally as a Windows desktop application through keyboard controls. Use the shoot’em up mechanics to destroy enemies and survive the infinite of countless of rounds. Casually play to get your own personal best score/rank, or competitively for the bragging rights of the ultimate highscore/rank against family and friends.

1. **General Description**

2.1Product (Game) Perspective

Infinity Starship serves as a fun retro-arcade endless space shooter inspired by the famous “Space Invaders”. The player plays as the Starship blasting lasers towards the incoming enemy UFO waves to survive the longest number of rounds and get a score that may be a part of the leaderboard ranking.

2.2 User Classes and Characteristics

* Starship Class: The user will control the Starship spaceship left to right.
* UFO Class: User must destroy these enemy waves to proceed rounds.
* Laser Class: Starship can shoot lasers controlled by the user. UFOs can also shoot lasers at random.
* Score Class: User can score points by destroying enemies and accumulating it for a rank that can take part of a leaderboard.

1. **System Features**

3.1Spaceship Controls

Users can move the Starship spaceship horizontally left to right.

* 1. Interactive Enemies

Rows of UFOs enemies that can shoot randomly at the Starship, while moving right to left edges of the screen, then descending vertically to try to reach and destroy the Starship spaceship.

* 1. Pixel Graphics

Graphic shapes that will represent the pixel sizes of mainly the Starship spaceship, the enemy UFOs, and alongside the lasers.

* 1. Shooting System

Users can shoot lasers from the Starship spaceship ascending vertically trying to destroy UFOs enemies. UFOs shoot lasers randomly descending vertically trying to destroy the Starship spaceship.

* 1. Health System

3 lives that the user must avoid getting hit by UFO enemies before an actual game over.

* 1. Scoring System

Users can collect points from destroying enemies where it accumulates/updates their current game score, that may become a rank as part of the leaderboard.

* 1. Restart/Quit

Users can restart or quit the game at any time throughout a session of actively playing.

1. **External Interface Requirements**
   1. User Interface

The game should be fun and easy to play with simple move and shoot mechanics, with clear engaging graphics that the user interacts with.

* 1. Hardware Interface

The game will use keyboard controls to move as well as keyboard input of basic playerID on their end of game score to be saved/stored in leaderboard. Mouse clicking to navigate through the interfaces/buttons will also be used.

1. **Non-functional Requirements**
   1. Performance Requirements

The game only allows support of 1 single player playing a game run at a time.

* 1. Security Requirements

N/A. Users simply download and play the game without any need for user access authentication.

* 1. Availability

The game should be playable at any given time after download, with a leaderboard that stores all previous scores and players ranking.

1. **System Constraints**

The Infinity Starship Game Application will need to operate within constraints:

* Compatibility: Must be compatible to run locally as a Windows desktop game application.
* Regulation: The game follows accordingly to any of its existing contents following the current copyright laws.