Space Race

Final Report by Chris Calland & Michael Grimm

User Manual

Space Race is a space themed game where the object is to dock at the spaceport while blowing up as many stray asteroids as you can.
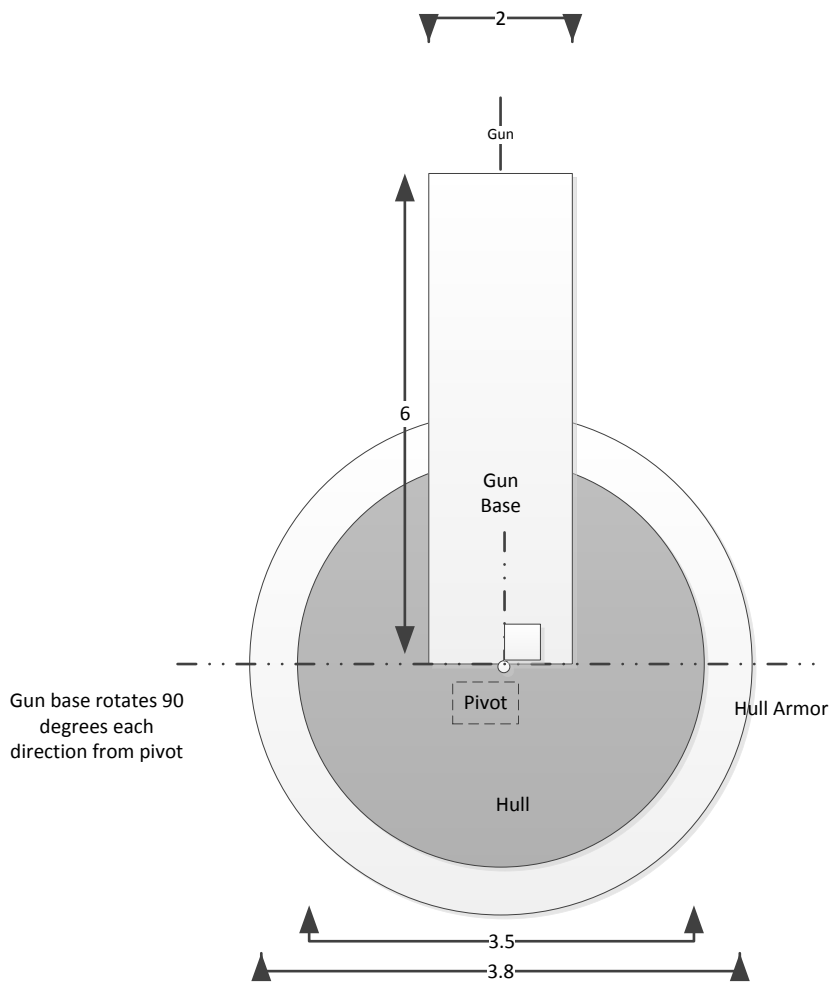
Key	Function
A	Move Left
W	Move Up
D	Move Right
S	Move Down
Left Arrow	Rotate Gun Left
Right Arrow	Rotate Gun Right
Spacebar	Fire Gun
Shift	Teleport
K	Skip to the end of the maze

Action	Point Value
Fire Gun	-1
Teleport	-50
Slightly damage an asteroid	25
Heavily damage an asteroid	50
Destroy an asteroid	150
End Game	Seconds Left * 5

Menu Item	Option
Game -> New Game	Reset the game and begin a new one
Game -> Play	Set the game state to Play
Game -> Pause	Set the game state to Pause
Game -> Difficulty -> Easy	Allows more rapid bullet rate of fire
Game -> Difficulty -> Hard	Allows much slower bullet rate of fire
Game -> Zoom -> Close	Zoom level of 100%
Game -> Zoom -> Far	Zoom level of 67%
Help -> How To Play	Reminder of keyboard controls & point values
Help -> Credits	Information on Game Creators

Object Design

Spaceship

Gun base rotates 90 degrees each direction from pivot

2

Gun

6

Gun Base

Pivot

Hull

Hull Armor

3.5

3.8
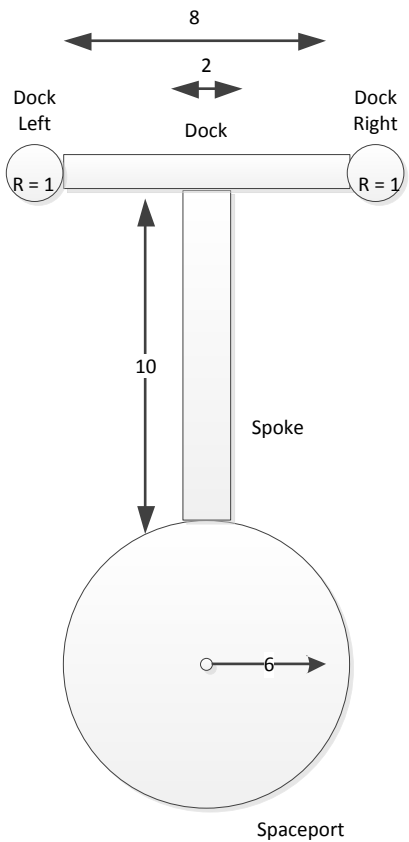
Spaceport

The spaceport has five spokes that each have a transform around the pivot rotated at (365 / 5) * n degrees. The end of each spoke has another pivot where the Dock spins 360 degrees constantly.

Known Bugs
- Wall collisions are imperfect
- User can teleport spaceship outside of the world bounds
- Clock does not stop after winning the game

Limitations
- Currently only supports one level

Features for the Next Version
- Multiple levels
- Moving walls
- Asteroid spawns
- Powerups

- More Teleports
- Different Gun Types
- Obstacles in the maze