# Skyrates

## Game Mechanics and Systems

### Systems

#### Multiplayer

Risk: Medium-Low

Players will be able to team up in a multiplayer environment to take down enemies. This enables the users to enjoy the game socially as well as have a change to pursue the environment on their own.

#### Ship Stats

Risk: Medium

##### Health

Risk: Low

All ships have a health. This allows for players to continuously attack other ships and weary them down, until they decide to either board or finish off the opponent. Player ships also have health and can be shot down (thereby forcing the player to escape on a float-boat back to their lair).

##### Damage

Risk: Low

Ships can impose damage by shooting at or ramming other ships. This would bring down the opposing ships health and possibly fell the ship (sink it).

##### Inventory

Risk: Low

As a ship component, you can add or expand your hull capacity, how much stuff you can fit in storage. This allows players to go out looting and taking materials back to their lair.

##### Movement

Risk: Low

The player can control their own ship with 3D movement (can move up/down, as well as forwards/backwards and turning). Other ships are also able to move as such. This allows for ships to go over or under other ships, depending on the motivation to do so. A ship could drop ammo onto ships below them or catch falling loot from below.

#### NPCs

Risk: Medium-High

There exist multiple flavors/factions of NPCs in the environment. This includes artificial intelligence for different behaviors. Passive behaviors are lower risk, but less interesting to players, whereas behaviors which engage the players (like engaging in battle) are higher risk and harder to fine tune.

#### Looting

Risk: Medium-Low

Players will be able to shoot down other ships to make loot drop from the ships. This will provide incentive to players to engage in combat. Making generated loot drop from ships is relatively easy to do with objects in Unity, but making diverse loot will take more time and thus makes this item slightly more at risk than it otherwise could be.

### Mechanics

#### Multiplayer

Risk: Medium-High

It is relatively easy to implement passive encounters (players exist in the same world) but adding coop battles and visiting each other’s lairs / raiding each other increases risk significantly.

#### Ship Customization

Risk: Medium

Players can swap out ship components on their ship to improve its stats and directly affect their play style. For example, components may affect speed, rate of fire, damage of cannons, ship health, hull/inventory space, crew capacity, etc. This also allows the team to creatively expand and add hull upgrades (making the ship itself larger for differently shaped), so that players can customize their ships further. This will require modular 3D art and multiple iterations on models.

#### Ships

Risk: Medium-High

Ships have various stats, are highly customizable, and must be able to be controlled by the player. This will take a decent amount of fine tuning and testing, as well as thorough development for expansion later. As this is one of the biggest game mechanics, it is a moderately high risk, mostly due to it being time-consuming.

#### Shooting

Risk: High

Players will be able to shoot at other ships from their ship. This mechanic is high risk because it will need thorough testing to make sure it is easy for players to shoot at other ships, projectiles will need to work properly with physics, and adding animations to when ships are destroyed.

#### Looting

Risk: Low

Players being able to loot other ships is low risk for the vertical slice. This is because the generation of loot is a moderately low risk item, and the gathering of loot is an extension of the navigation mechanic. Being able to hold loot is the reason for inventory space in ships. So this item is low because it has no work of its own that will need to be done, aside from testing.