

BSc (Honours) in Computing Software Development 2

Project Proposal Form

Group details:

Group Name:	Pain in Diaz	
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Project details:

Proposed project name	One Piece Pixel Showdown
Proposed Libraries	libGDX, Junit, KryoNet

Game Details:

Briefly explain what the game is and what features it will have. Include in your description what multiplayer features it will have specifically.

One Piece Pixel Showdown is a 2D pixel art multiplayer game where Players can pick between the Pirates and the Marines. The game will be made up of three levels.

Level 1(Single-player Tutorial):

Pirates/Luffy:

If you choose the pirates side in level you will battles waves of hostile pirates and Arlong, the boss, who employs freezing and water-shooting techniques. Luffy activates Gear 2, which increases speed and doubles punch strength, if his HP drops below 20%.

Marines/Akainu:

If you choose the marines side you will face battles waves of pirates and encounter Crocodile, the monster, who uses drowning and dissolving sand techniques to inflict more damage .

Level 2 (Single-Player Boss Fight):

Pirates/Luffy:

In this level the pirate side will have to face lasers and explosive attacks against Kuma, the boss and unlock a new technique, Gomu Grab, that enables Luffy to launch himself with Gomu Rocket and capture things or adversaries.

Marines/Akainu:

In this level the marines confront Ace, the boss, who can fly, blast fire, and produce storms. They unlock a new ability whereby generating hot zones, Akainu's Ground Melt mechanic momentarily changes the topography

Level 3 (Multiplayer Pvp):

In the last level both sides face off online in one final battle. Luffy's agility and Akainu's raw strength create a balanced yet intense showdown.

Features:

1. Combat Mechanics: Basic attacks, special moves, counter moves, and power-ups.
2. Power-Ups: Luffy's Gear 3 and Akainu's Magma Comet.
3. Networking: Server-client model using KryoNet for online PvP.
4. Persistence: Save progress using lightweight file storage (JSON).
5. Art & Animation: Smooth animations with sprite sheets using libGDX.
6. Audio: Background music and sound effects tailored to each character's moves and environment.

Multiplayer Features:

1. The matchmaking lobby where players wait to connect for Level 3.
2. State synchronization via server broadcasts ensuring smooth gameplay.
3. Interpolation and buffering techniques to handle latency.

