

Project Timeline Document

1st Sprint October – December

October – Planning and Research

- Finalize core game concept, mechanics, and scope
- Define key player abilities and traversal mechanics (wall running, jumping, sliding, swinging)
- Research movement systems in similar games
- Research best practice for Finite State Machine(FSM from here) for player movement
- Design prototype FSM architecture
- Set up camera system

November – Core Movement System

- Set up basic FSM for player movement. Include running, jumping, walking, crouching and running
- Research and implement collision library for SFML
- Set up basic test level
- Ensure fluid transition between all connected states
- Ensure movement feels responsive before developing further

December - Advanced Movement and Early Combat

- Implement wall jumping and sliding
- Implement wall climbing and swinging mechanics
- Introduce basic melee attacks (light/heavy)
- Implement separate FSM for combat states
- Create short test level to showcase traversal and combat foundations

2nd sprint January – May

January – Expanding combat mechanics

- Implement multiple weapon types (sword, bat, shotgun) using an abstract class to allow for easier expansion
- Add FSM for weapon animations and attack

- Link combat system with movement FSM to allow unique attacks during traversal (e.g., aerial attacks, sliding strikes)

February – Enemy AI

- Develop enemy movement and combat FSMs
- Implement chase, patrol, and attack behaviours
- Ensure enemies can use similar traversal mechanics (e.g., wall runs or jumps)

March – Level Design & Gameplay Loop

- Design multi-layered maps that encourage parkour traversal
- Add interactive elements (swing points, walls, platforms)

April – Polishing & Feature Finalization

- Add particle effects (dust trails, slashes, impacts)
- Implement sound effects and basic background music
- Improve UI for health, stamina, and weapon selection
- Fine-tune player and enemy abilities
- Adjust difficulty scaling across levels

May – Finalization & Presentation

- Integrate all final assets (art, audio, UI)
- Prepare presentation materials
- Deliver final presentation/demonstration of completed game.