

Game Concept

Game Type: 2D Platformer

Platform: PC

Concept : A short 2D platformer where the player runs, jumps, avoids hazards, and reaches the exit. The game has **3 levels**, increasing slightly in difficulty.

Scope & High-Level Milestones

Milestone 1 : First Playable

Goal : The game can be played from start to finish with core mechanics.

Deliverables :

- Player can move and jump
- One playable level
- Basic enemies or hazards
- Simple UI (start + restart)
- Game can be built and played

Milestone 2 Alpha Build

Goal: All main features are implemented (not fully polished).

Deliverables :

- All 3 levels playable
- Enemy behaviors implemented
- Sound effects & basic music
- Basic win/lose conditions

- Rough visual style

Milestone 3 Beta Build

Goal : Feature-complete and mostly polished.

Deliverables :

- Bug fixing & balancing
- Improved UI/UX
- Visual polish & animations
- Performance optimization
- Playtesting feedback applied

Work Breakdown Structure (WBS)

Focused on Milestone 1: First Playable

Epic 1 : Player Core Mechanics

Task	Description	Est.Time
P1	Set up player character prefab	6h
P2	Implement horizontal movement	8h
P3	Implement jump & gravity	8h
P4	Add collision & ground detection	6h
P5	Basic player animation states (idle/run/jump)	10h

Total : ~38h

Epic 2 : Level Blockout & Gameplay

Task	Description	Est time
L1	Design level layout (paper or tilemap sketch)	6h
L2	Create tilemap & platforms	10h
L3	Add hazards (spikes / pits)	8h
L4	Add goal object (exit)	6h
L5	Camera follow setup	6h

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Total: ~36h

Epic 3 : Basic UI & Game Flow

Task	Description	Est time
U1	Main menu (Start button)	6h
U2	Win / Lose screen	8h
U3	Restart level logic	6h
U4	Scene transitions & flow control	6h

Total: ~26h

Epic 4 : Integration & Build

Task	Description	Est time
I1	Integrate player with level	6h
I2	Basic testing & bug fixing	8h
I3	Create playable build	4h

Total: ~18h

4) Dependencies :

- P2 (Movement) depends on P1 (Player prefab)
- P3 (Jump) depends on P2 (Movement)
- P4 (Collision) depends on P1 (Player prefab)
- L2 (Tilemap) depends on L1 (Level design)
- L3 (Hazards) depends on L2 (Tilemap)

- I1 (Integration) depends on P4 (Collision) and L2 (Tilemap)
- U3 (Restart logic) depends on U2 (Win/Lose screen)
- I3 (Build) depends on I2 (Testing)

5) Critical Path

Critical Path = longest chain of dependent tasks that determines total time

Critical Path Tasks:

1. P1 → P2 → P3 → P4
2. L1 → L2 → L3
3. I1 → I2 → I3

If any of these are delayed, the First Playable milestone is delayed.

Phase	Task IDs	Duration
Player Core Mechanics	P1–P5	38h
Level Blockout	L1–L5	36h
Basic UI	U1–U4	26h

Integration & Build	I1-I3	18h
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Total Estimated Time (First Playable) :
~118 hours