Technische Universität München - ShaderKurs WS 2018/19

Wumpus World

Game Design Document

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Structure

# Mission Statement

# Sprints

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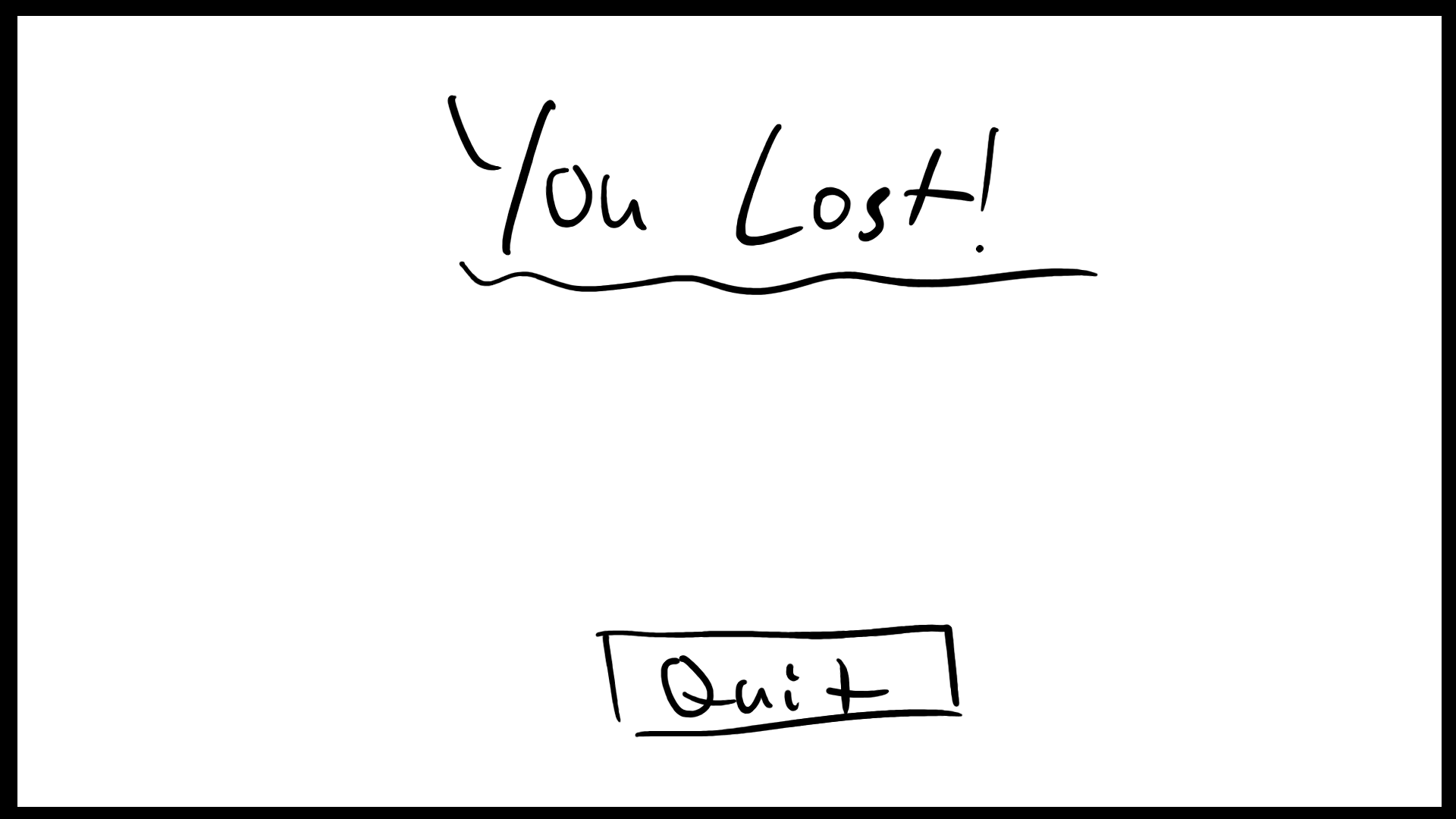
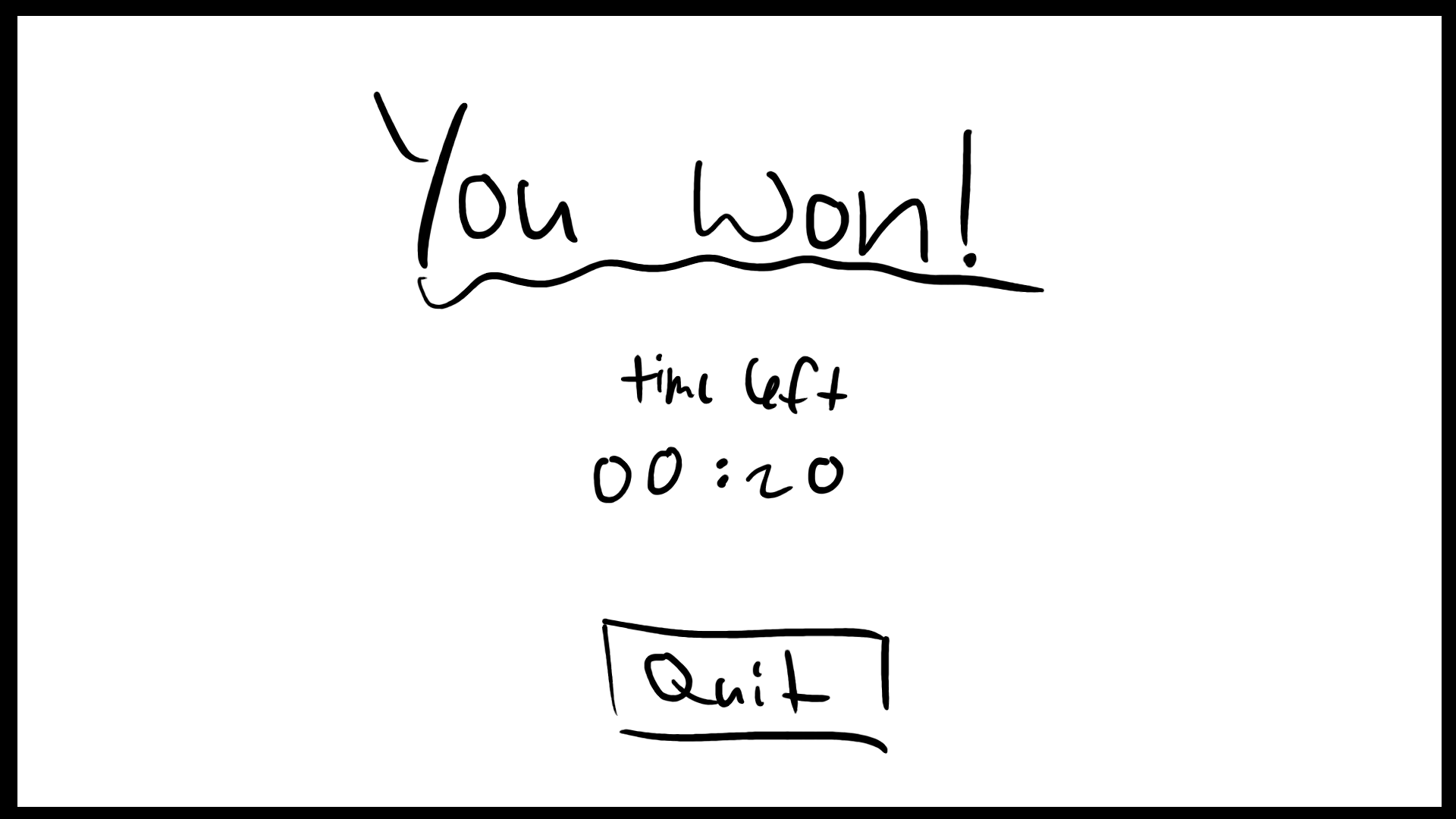
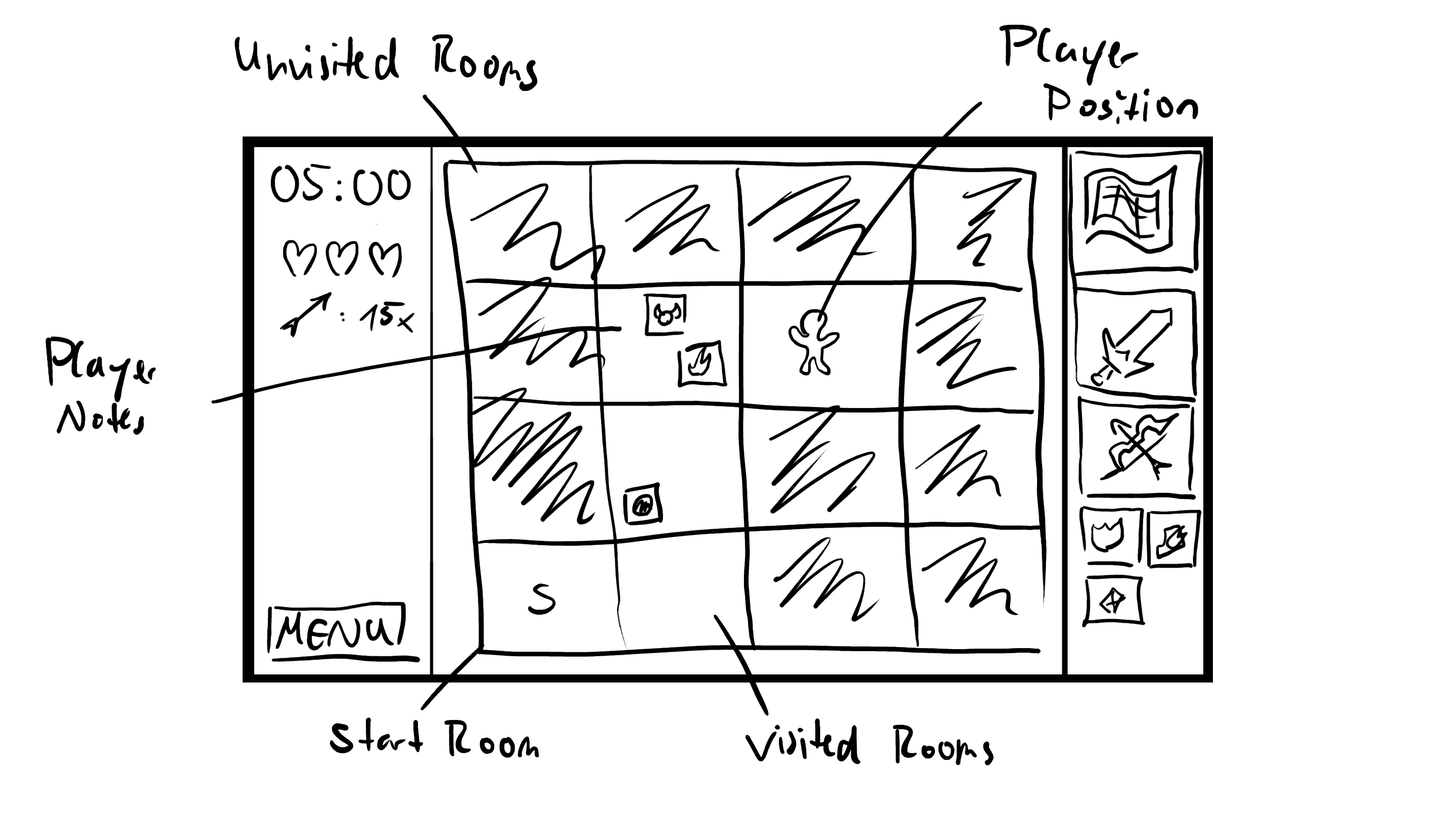
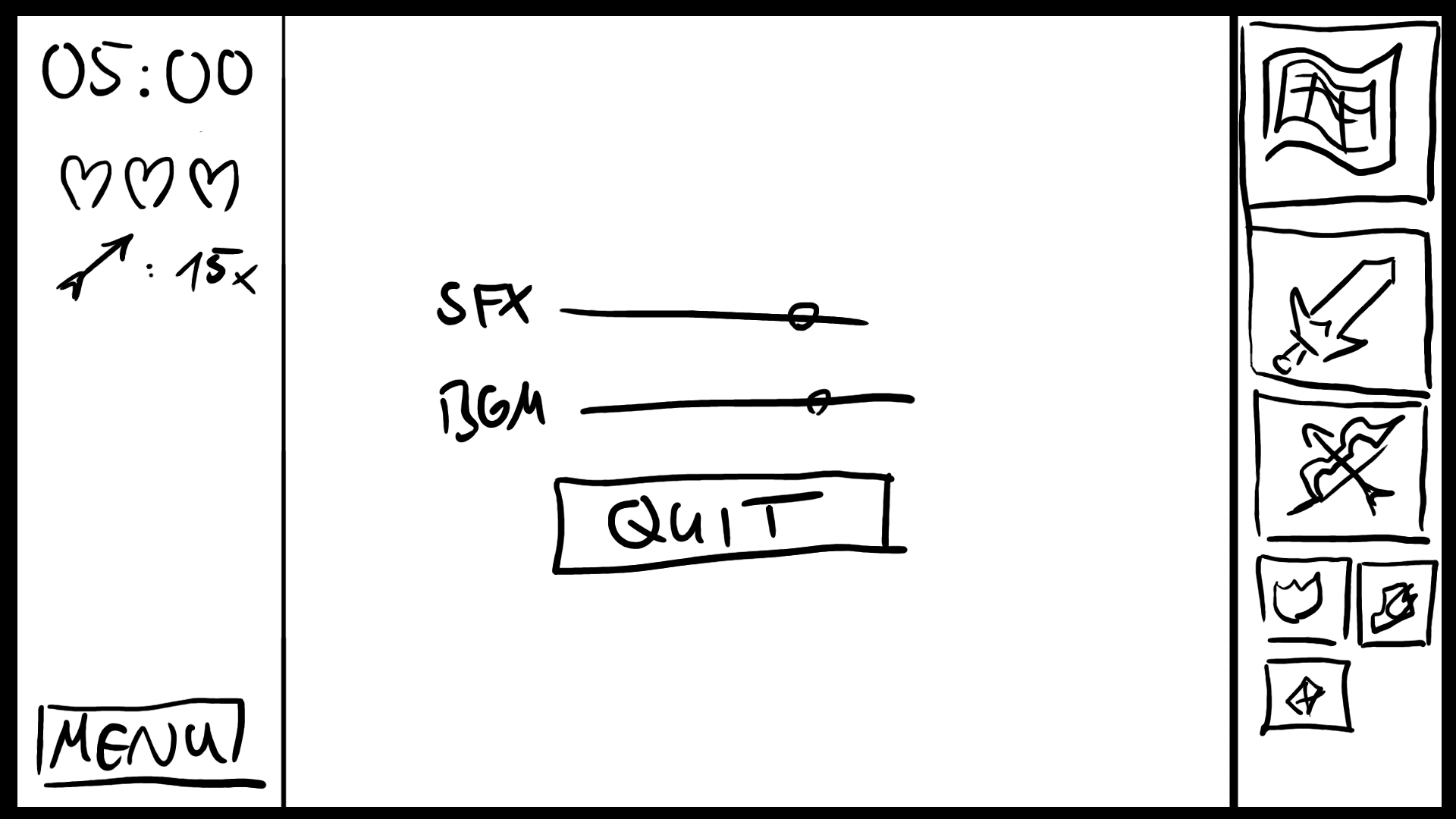
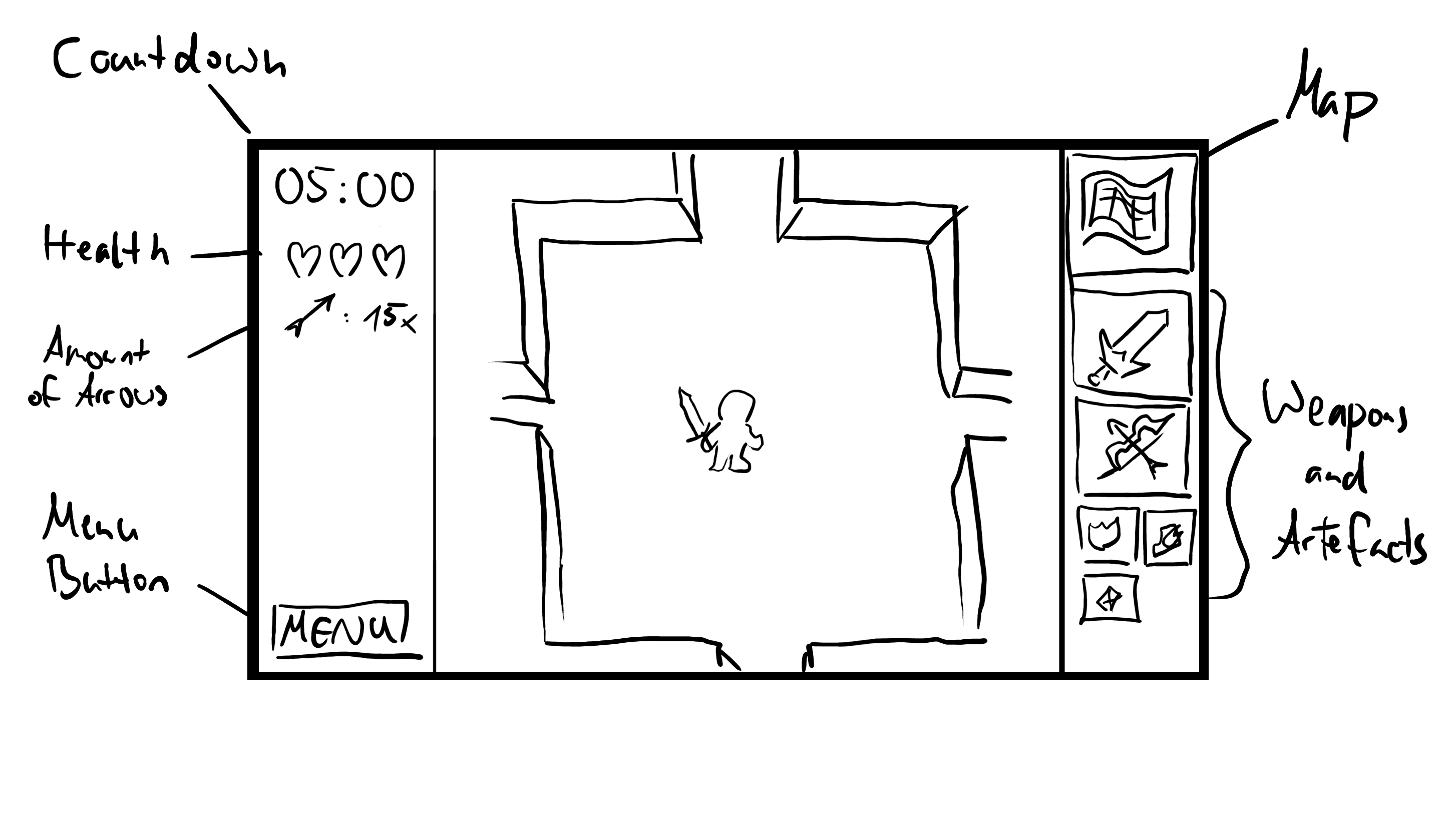
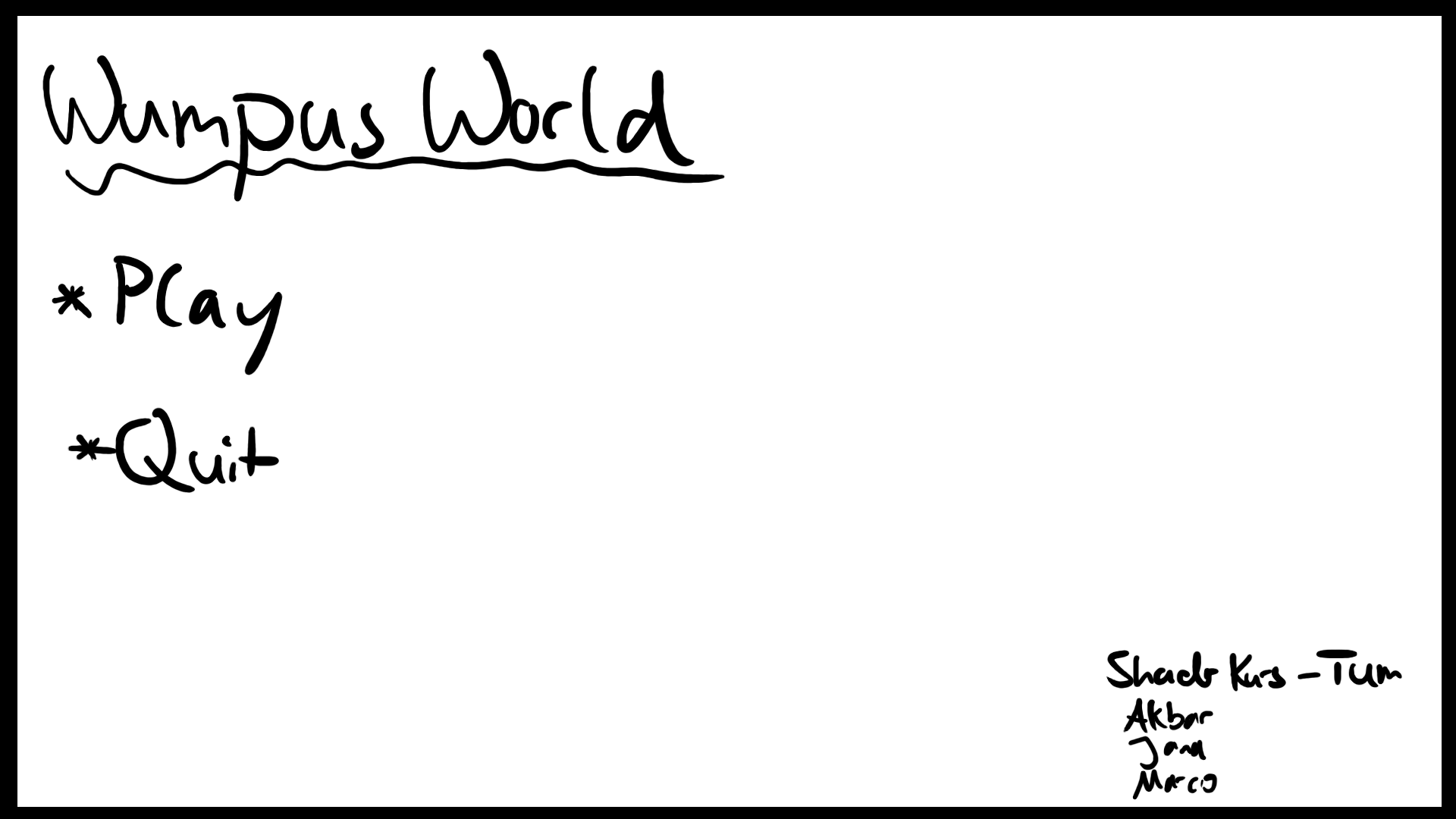
# Mission Statement

Wumpus World is a Top-Down-Shooter game where the player has to go through a maze to get an artefact and defeat the final boss.

# Sprints

## Core Features

### Game Loop



### 

### Player



Design:

* Matthias Althoff lol
* Male
* Chibi Style
* Black: Idle state with sword [Sprint 2]
* Red: Wing artefact
* Green: Anti heat barrier artefact
* Blue: Wumpus slayer artefact

Movement:

* WASD: Walk
* Right Mouse Button: Run
* Left Mouse Button: Attack  
   When clicking/holding, player looks at mouse

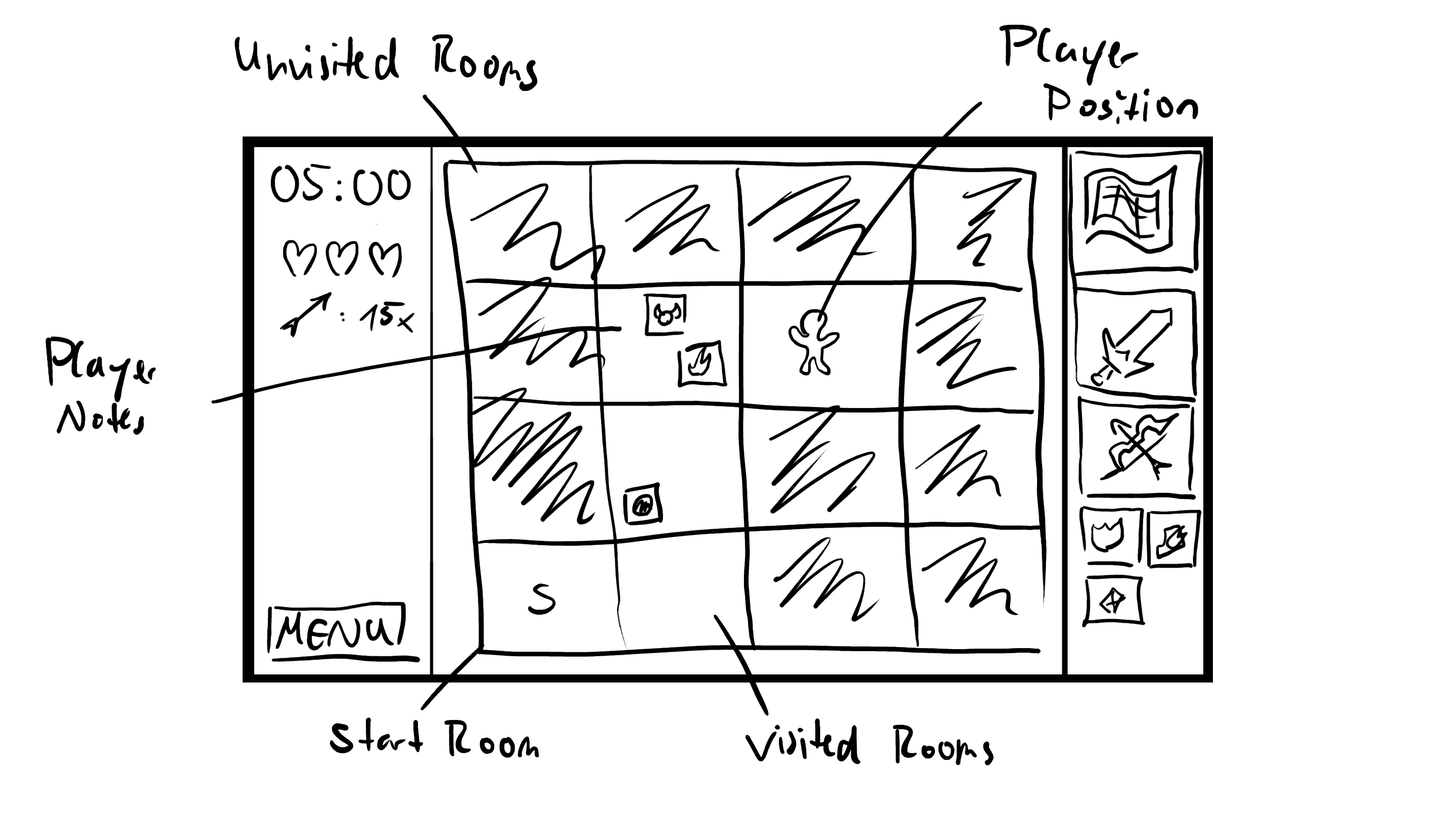
Animation:

* Idle
* Walk: forward, sideways, diagonal left and right; each one plays backwards  
   when going to the opposite direction; speed duplicates when running
* Attack: sword swing, looks at mouse while swinging [Sprint 2]
* Aim: holds bow, looks at mouse [Sprint 2]
* Dying

Shader: (Pls add more ideas)

* Body: diffuse  
   dissolve vertically when dying  
   glow eyes when Wumpus slayer is active   
   glow ears when anti heat is active
* Body Aura: wireframe when anti heat is active  
   dissolve vertically when dying
* Sword: diffuse  
   dissolve vertically when dying  
   glow edge when Wumpus slayer is active
* Bow: diffuse  
   dissolve vertically when dying
* Wings: diffuse  
   dissolve vertically when dying  
   particle system (not shader) for fire

### Maze



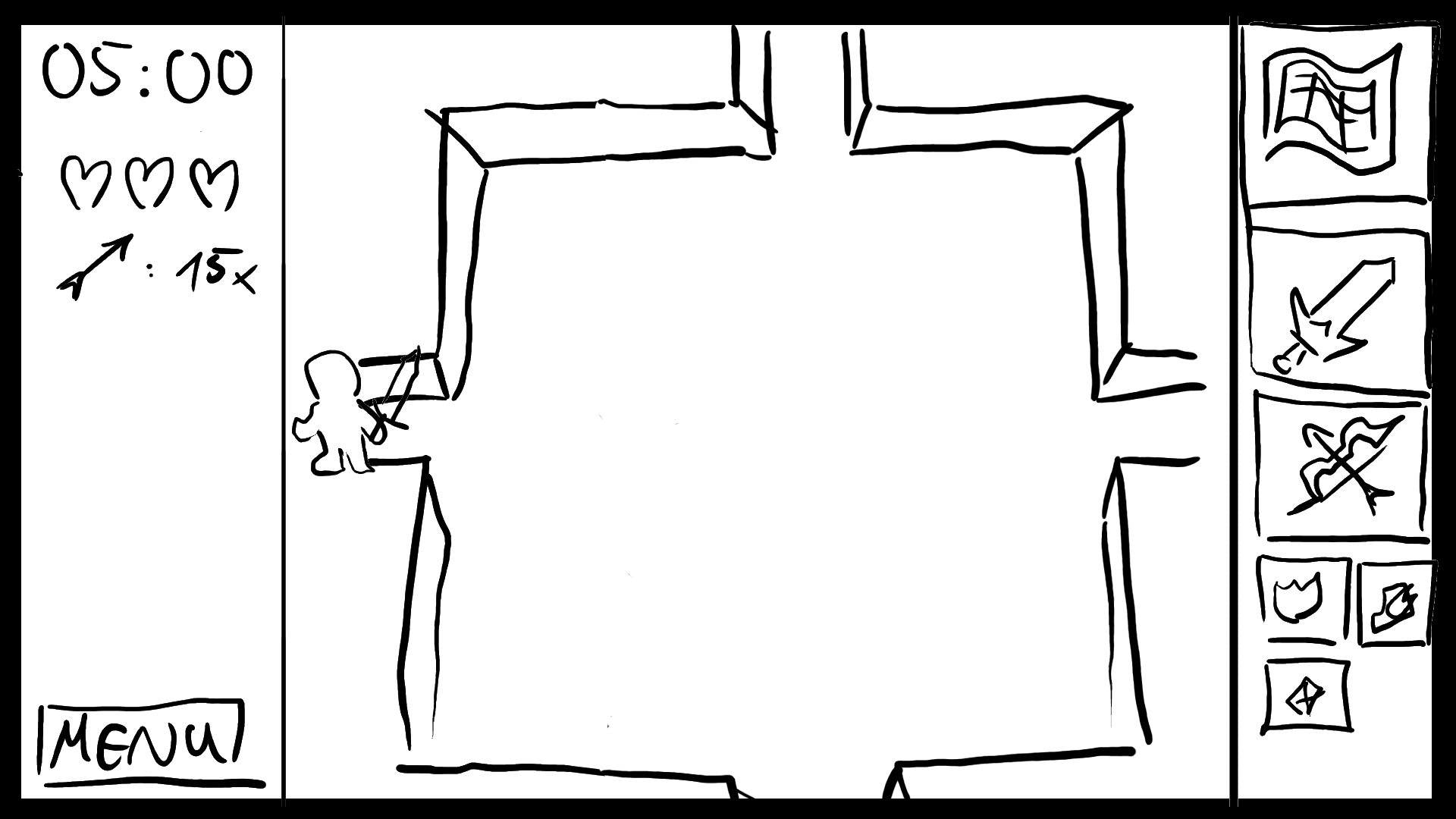
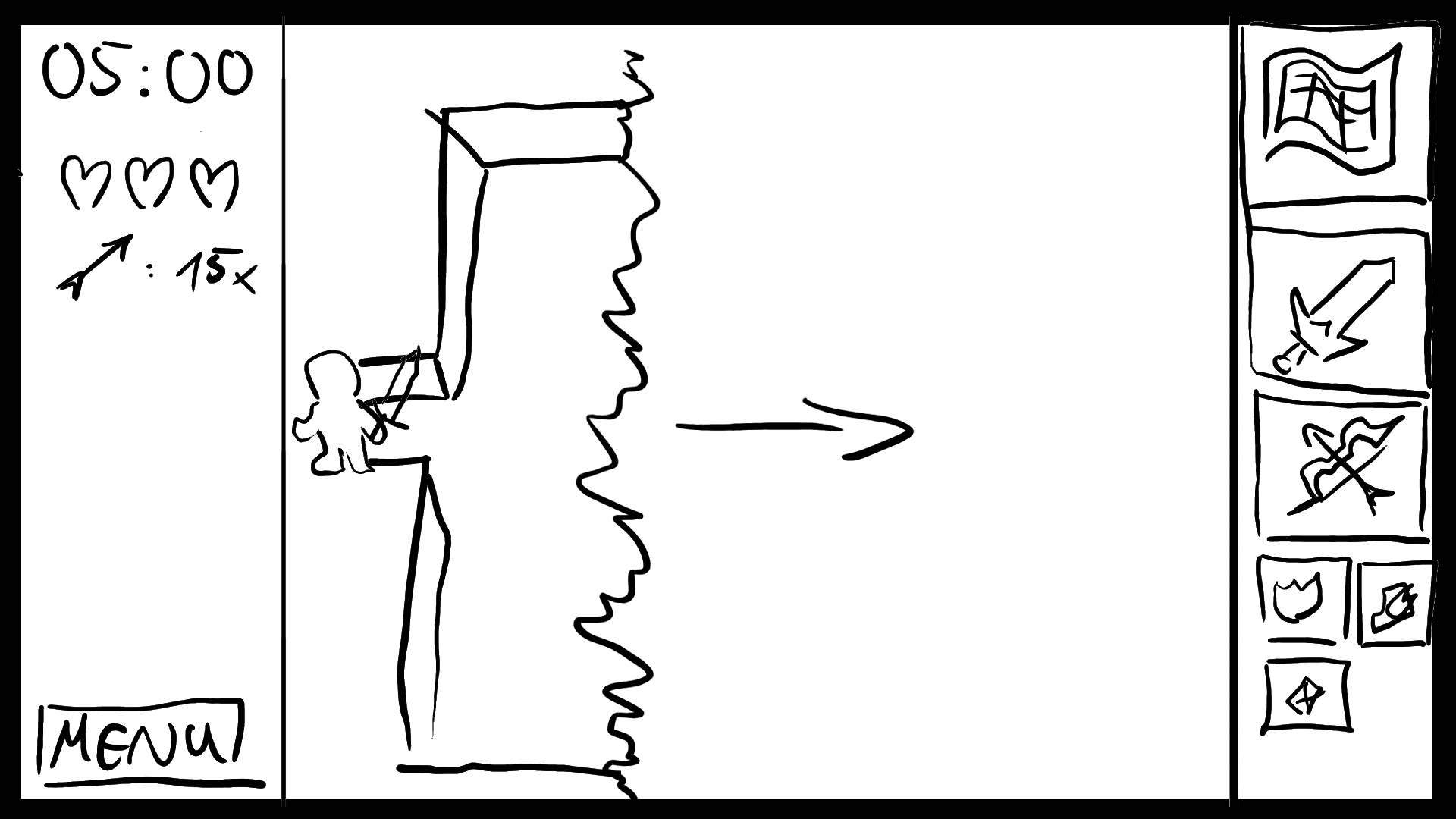
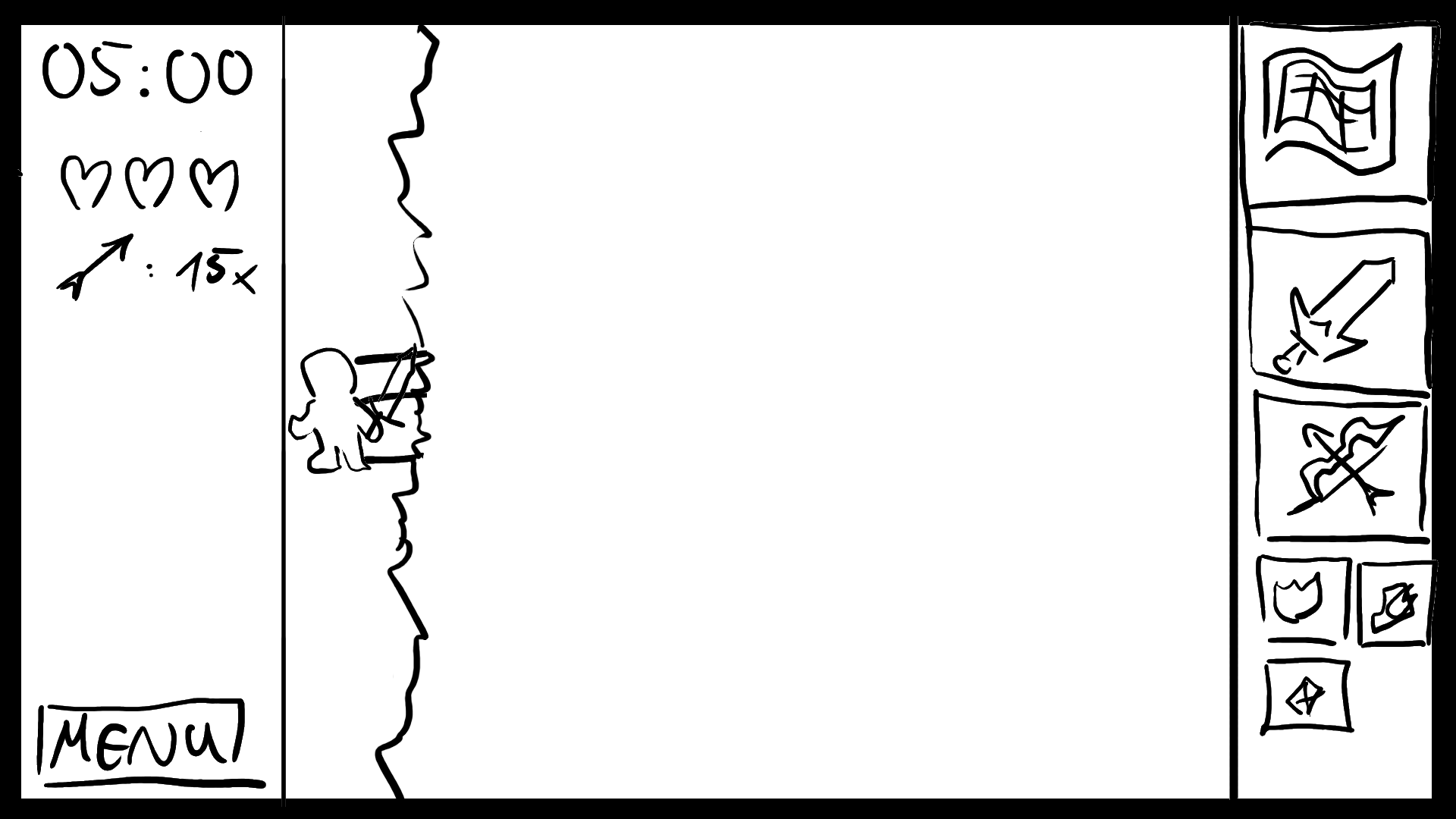
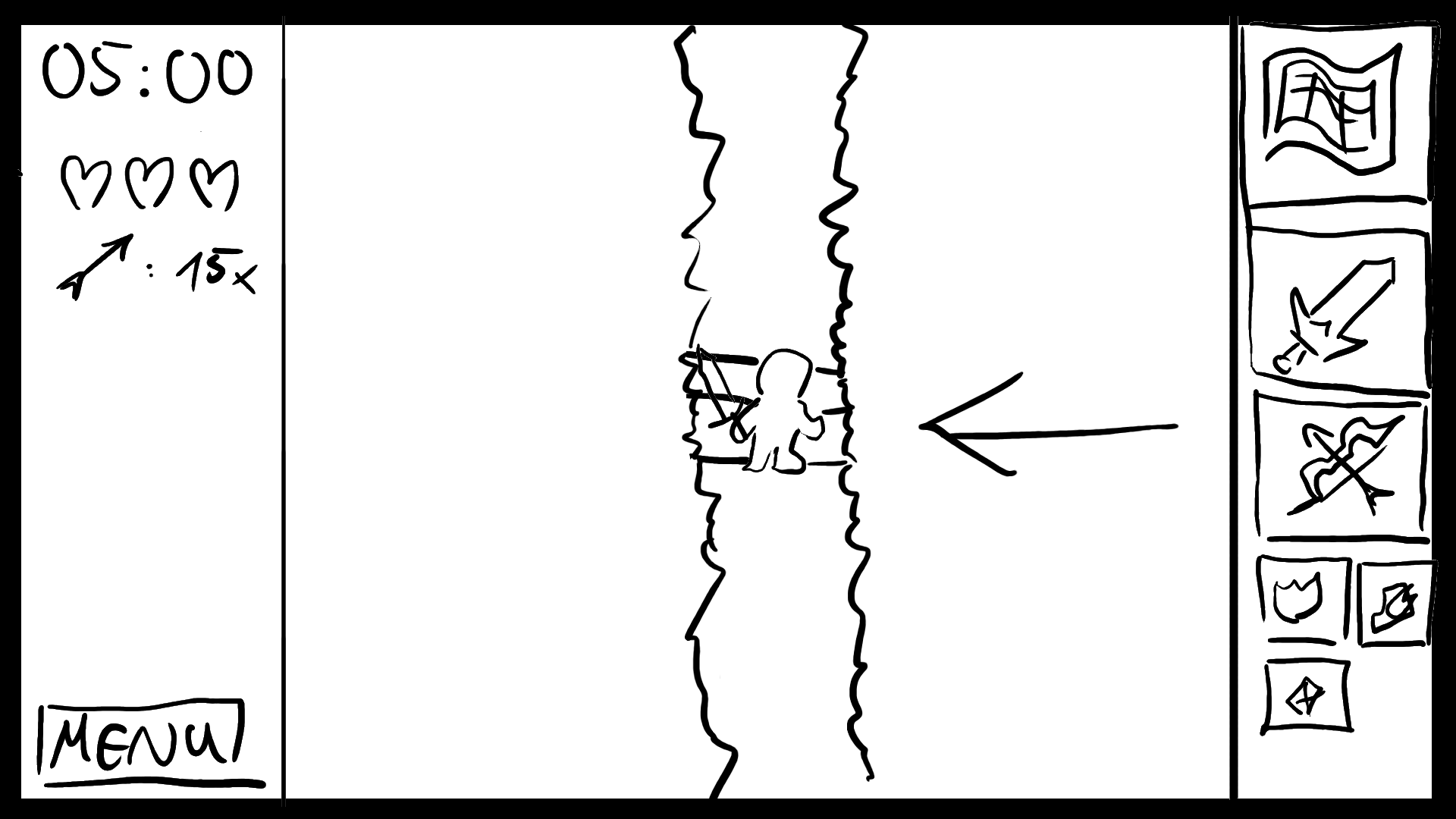
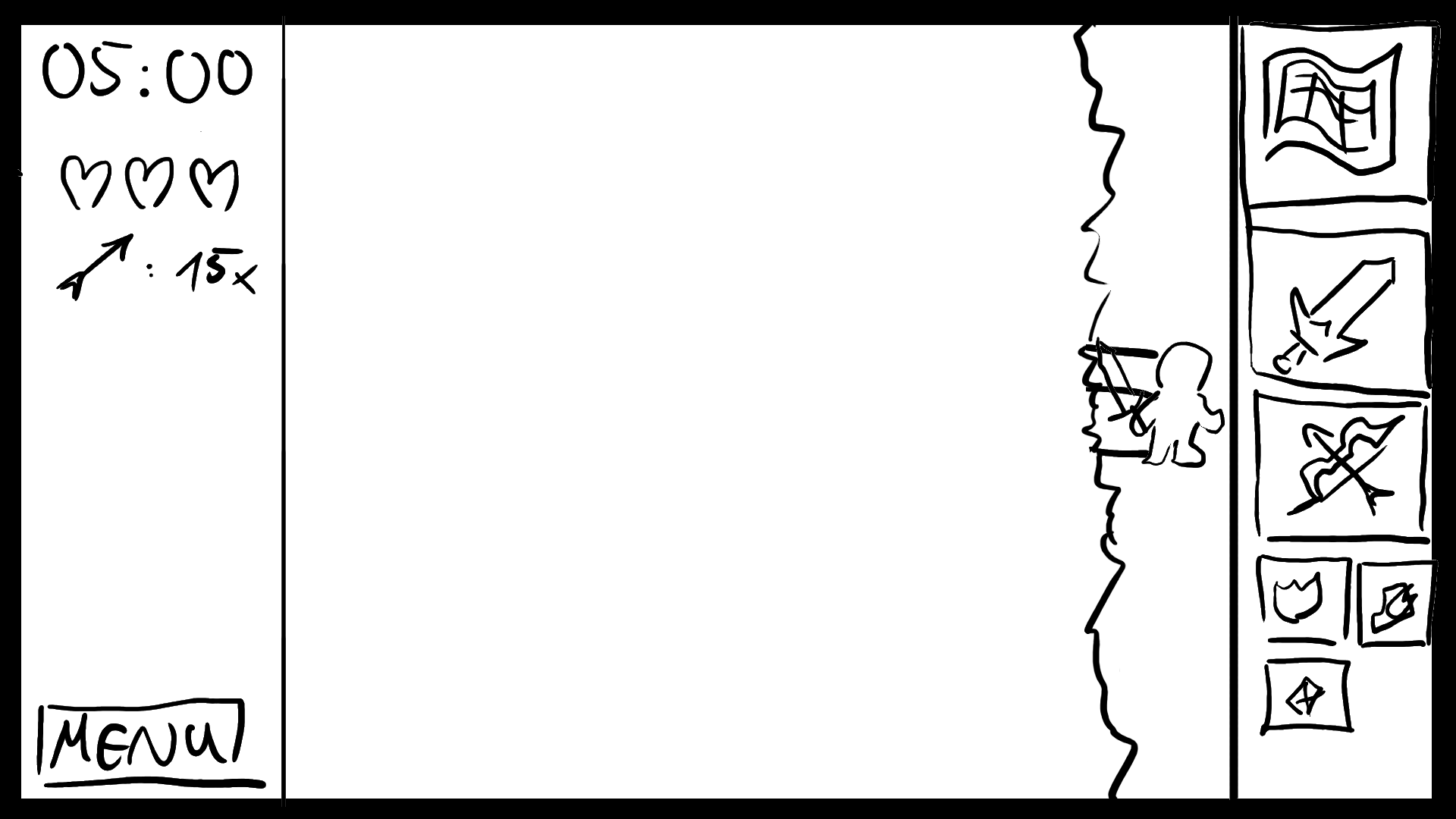
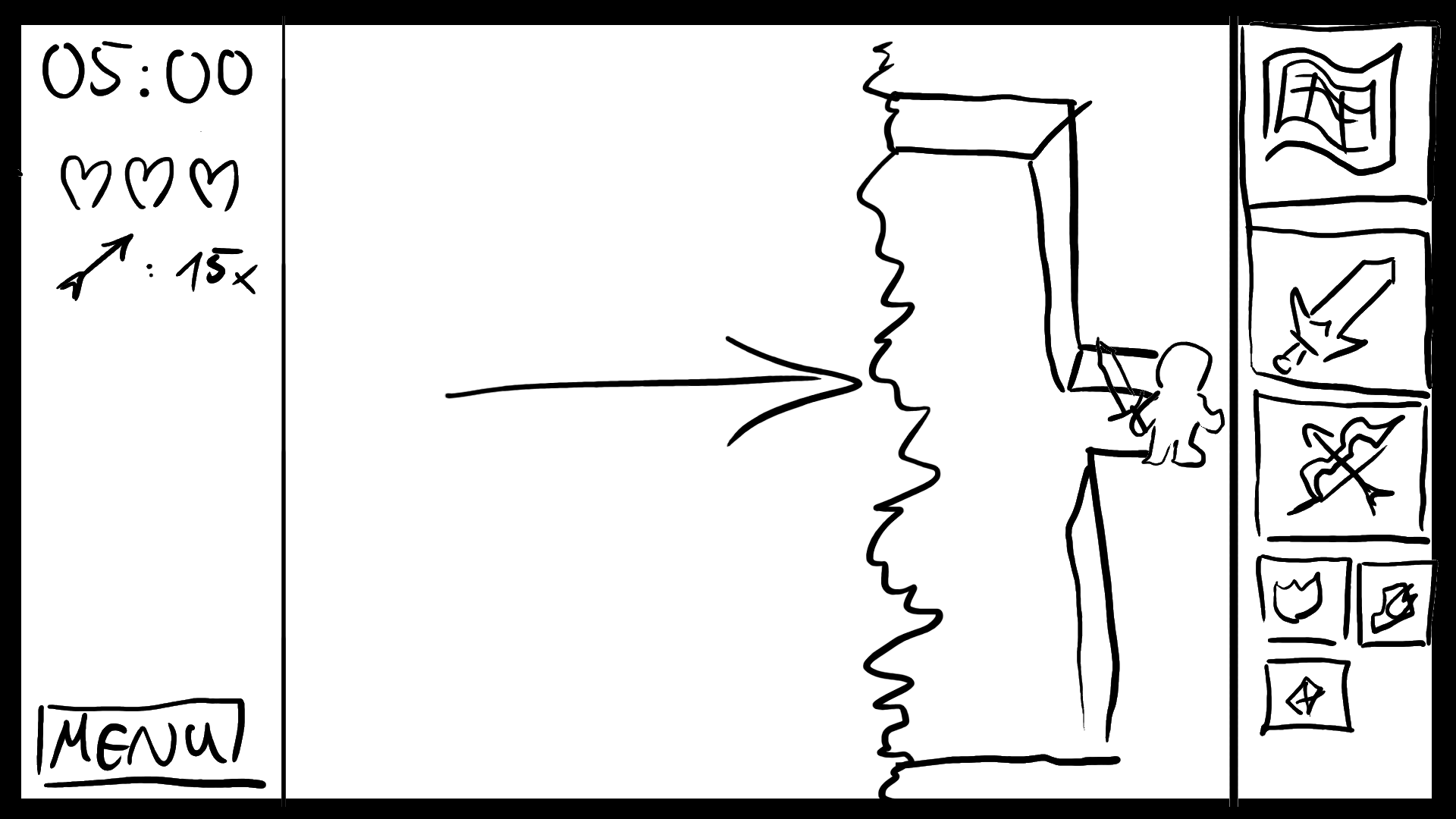
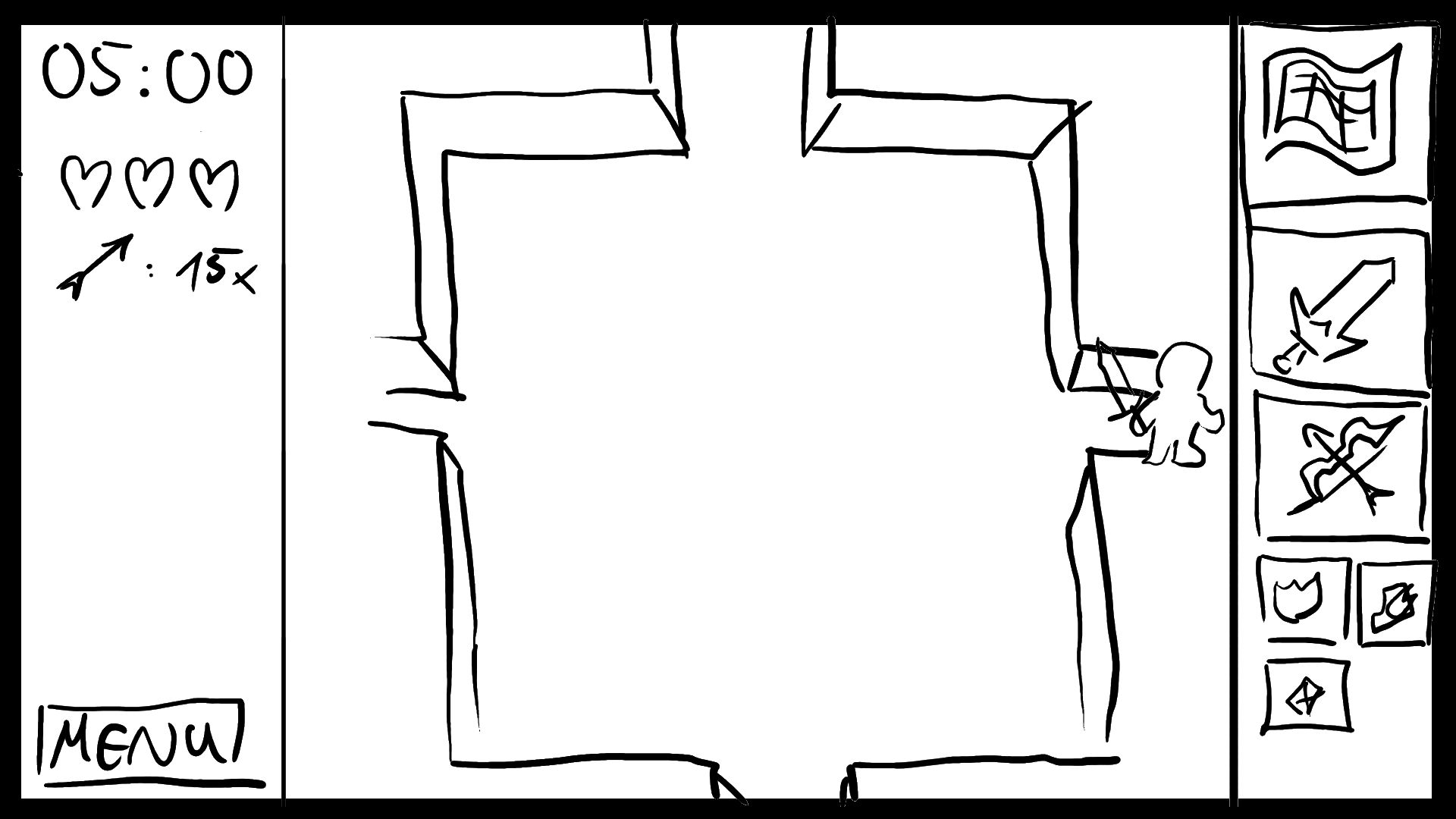
* Start: Bottom left corner  
   Respawns there when dying  
   Neighbor rooms are no instant death rooms
* Instant Death: Wumpus, Pit or Lava  
   Neighbor Rooms indicate its location with shading effects on the wall
* Treasure Room: Contains artefacts to overcome Instant death

On map menu, the player can select a block and mark it with the three symbols. So the player can remember which effects are in which rooms.

Shading: (Pls add more ideas)

* Indicators: Color waves  
   Pulsing  
   Shaking with geometric shader  
    
   Effect-Death pairs are randomized -> on demoday more people can play without  
   cheating  
   Alternatively: for each death an effect that fits (What do you think?)
* Visibility: Dissolve, only active room is visible -> dissolve effect when going to next room
* Pit: Dissolve, is actually the same with visibility but in y coordinate

Animation:



Meanwhile, the player cannot move. In that way the player sees first if the room is safe or not. Then the player instantly dies before he can move again lol.

### Instant Deaths

* Pit: Player falls
* Lava: Player burns and dies instantly  
   Shader: pulsing glow  
   Particle System for fire
* Wumpus: Laser Vision kills the player  
   Shader: Laser as particles with compute shader

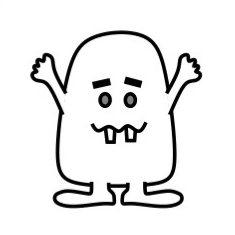
### Artefacts

* Wings: Fly over pit
* Anti-Heat: Walk through lava
* Wumpus slayer: Immune to Wumpus laser

Even though wings and anti-heat are passive, they cannot be used at the same time with other items. The Wumpus slayer is fully passive and always active once achieved.

### Wumpus

Reference picture from the AI lecture:



[Sprint 1] With the Wumpus Slayer, the player shines so bright that Wumpus dissolves. -> Win

[Sprint 3] More boss fight.