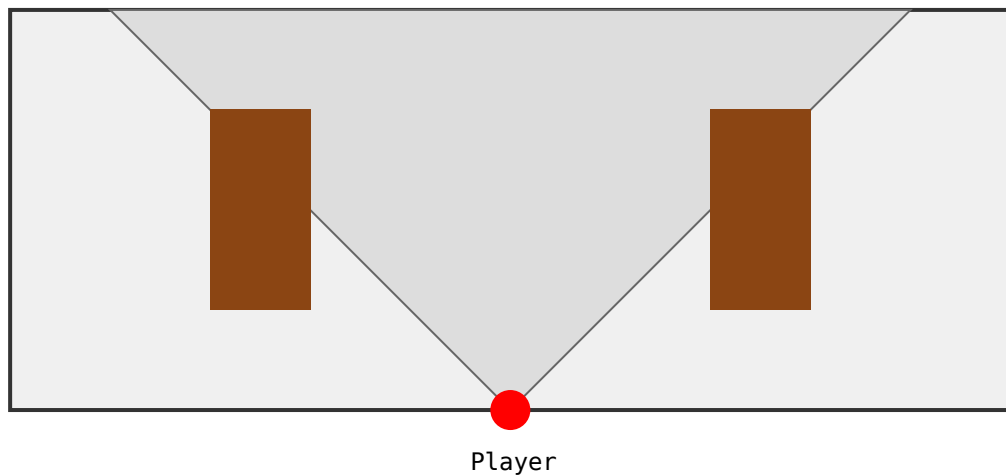# 🎮 Cub3D Project Documentation

Project Overview

Cub3D is a 3D game engine inspired by Wolfenstein 3D, using raycasting technology to create a 3D perspective in a 2D maze.
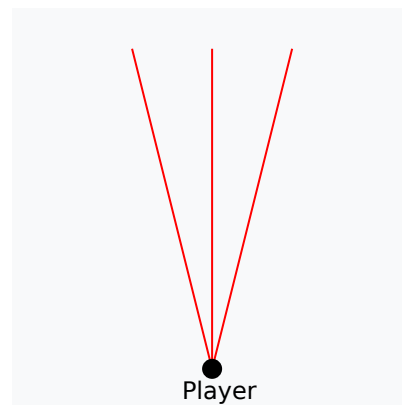
Player

Core Components

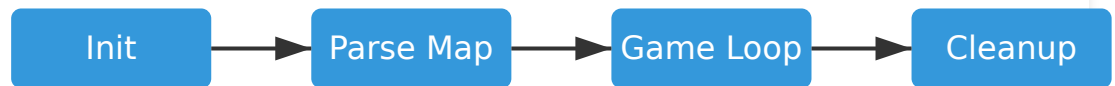## 🗺️ Map System

```
11111111
10000001
1000N001
10000001
11111111
```

🎯 Raycasting

Player

🎮 Controls

- WASD: Movement
- Mouse: Look
- E: Interact
- Shift: Sprint

Implementation Workflow

```
Init  →  Parse Map  →  Game Loop  →  Cleanup
```

File Structure

🔧 Core Files

- main.c
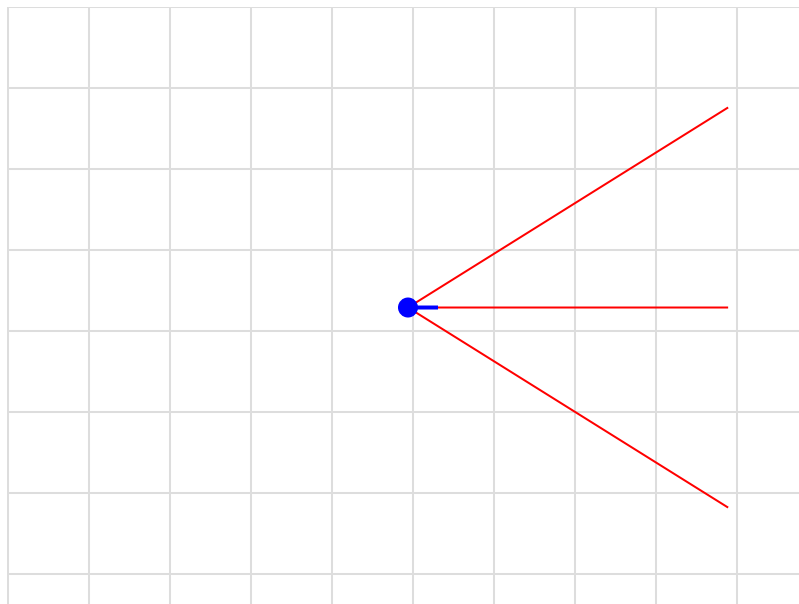- init.c
- cleanup.c

🎨 Rendering

- raycast.c
- texture.c
- minimap.c

📊 Logic

- movement.c
- hooks.c
- vectors.c

Raycasting Algorithm

Building and Running

```
make          # Compile the project
./cub3D map.cub  # Run with map file
```