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Project Specification

# Introduction

I have chosen to make a game in C++. The game will be a 2D open-world survival game where the player will have to fight to survive. The world data will be stored to the database so the player can build and save their changes. The player’s inventory will also be saved to the database, so their progress is not lost between sessions.

# Purpose of the Software

The purpose of the software is to entertain. The player will be able to build, fight, and craft tools and weapons in order to survive. They will have an inventory to manage and will need to make sure they have the right tools in their hotbar for the job. The user will be able to choose what they want to do, as long as they survive.

# Description of the Functional Requirements

The software will allow the user to destroy blocks, place blocks, build tools/weapons, and fight. The user will also have a few settings to change related to video and audio. The map and the user’s inventory will be saved to a MySQL database when the user clicks the save button, and will be loaded from the database when the user clicks the continue button after exiting the game.

# Survey of Relevant Literature

SQL Queries for Mere Mortals: A Hands-On Guide to Data Manipulation in SQL 3rd Edition by John L. Viescas will be necessary for me to brush up on my SQL as it’s been a while since I’ve made a program that utilizes a database.

# Similar Software

There are tons of similar games, the most popular being Terraria. Other games that could be considered similar and that are commonly compared to Terraria include: Starbound, Minecraft, and RimWorld. I have played most of these games and really enjoy each of them, but don’t want my game to be too similar to any of them.

# Project Plan

I always like to start with a quick sketch of what I want the UI to look like. I will then consider how I want to save the data in the database for when the user saves, which is a large part of the game. Then I’ll work on a UML diagram of each class and connect them to see what I may have not considered.

# Conclusion

It will be a lot of technical work to get this game running as I won’t be using an engine, but I look forward to the challenge. The part that I believe will be the most difficult to implement is the enemy’s AI, it will most likely just be a simple pathfinding algorithm at first.