The below hours log is based on bookkeeping that was originally written on pen and paper. It only includes time spent on the game itself, so the hours spent on any reports or this hours log itself are not included. Those other tasks not taken into account in this hours log probably total something between 3 to 7 hours.

15.03.2022

- 1 Hour
 - Godot 3.4 installation
 - Creating the project
 - Main menu
 - * Working "Quit game" button
 - * Testing the button with "Print"
 - Watching a "Godot main menu tutorial" video

16.03.2022

- 1 and a half hours
 - Pause menu
 - Watching tutorial videos
 - Game can be paused
 - You can resume the game from pause menu
 - Test scene with a moving 3d model

17.03.2022

- 1 Hour
 - saving the game (just saves the position of the moving 3d model)
 - Feedback for the user that the save was successful via a popup

18.03.2022

- 40 min
 - Changing the save game popup to its own menu view

20.03.2022

- 50 minutes
 - Loading the game (just loads the position of the 3d shape)

21.03.2022

• > 1 hour 15 min

- A simple "Minecraft" looking area of blocks
 - * inefficient, own mesh per block
- Improving the "load game" button so its not shown if no saved game present

24.03.2022

- $\sim 1 \text{ Hour}$
 - "Chunk"-generator that creates an uniform chunk that has a specified height

25.03.2022

- 35 minutes
 - Fixing a bug with the chunk generator

26.03.2022

- 2 hours 15 minutes
 - Chunk is a single mesh

01.04.2022

- 1 hour 15 minutes
 - Randomized chunk generator
- 1 hour 30 minutes
 - fixing a graphical bug with the chunk where some faces of the cubes could not be seen

02.04.2022

- 2 hours 35 minutes
 - Character controller
 - Physical terrain
- $\sim 2 \text{ hours}$
 - fixing physics bugs
 - fixing bugs with terrain
 - fixing some graphical bugs

09.04.2022

• 1 hour 20 min

- Placing blocks in terrain

10.04.2022

- 1 hour 20 min
 - Terrain generator
- $\sim 2 \text{ hours}$
 - Chunk generation in its own thread

11.04.2022

- 1 hour 30 min
 - Trying to fix movement jitter
 - trying to make the terrain generation faster
 - Jumping
 - Skybox
- 40 min
 - Optimization: do not double generate chunks
- ~ 1 hour 30 min
 - Infinite terrain generation

12.04.2022

- $\sim 4 \text{ hours}$
 - a preview block that shows where a new block would be placed
- $\sim 1 \text{ hour}$
 - fixing a bug with placing blocks to the field

13.04.2022

- 30 mins in morning and 30 mins in the night (about 1 hour total)
 - jitter bug fixed
 - deleting blocks from terrain

14.04.2022

- 40 minutes
 - Saving the location of the character

22.04.2022

- $\sim 40 \text{ min}$
 - $-\,$ Try to fix a bug where character sometimes falls though terrain
- $\sim 30 \text{ mins}$
 - try to kick player upwards if they fall through terrain

23.04.2022

- 1 Hour
 - Fixing a bug with the back to main menu button
- 30 min
 - Unloading faraway Chunks
- 30 min
 - base work for saving the terrain edits
- \bullet 2 hours 10 minutes
 - Saving the terrain works

25.04.2022

- $\sim 10 \text{ minutes}$
 - better movement physics
 - Save only dirty (edited) chunks

26.04.2022

- ~ 15 minutes
 - System to teleport to a known safe location if they try to go to a not yet loaded chunk

29.04.2022

- $\sim 1 \text{ hour}$
 - Textures for blocks
- ~ 1 hour 20 minutes
 - research on what is the best way to support different textures for different types of blocks in the same chunk

01.05.2022

• $\sim 1 \text{ Hour } 5 \text{ min}$

- support for different texture blocks
- $\sim 40 \text{ min}$
 - Procedurally generating different types of blocks into the terrain

02.05.2022

- $\sim 30 \text{ minutes}$
 - significantly faster chunk generation
- ~ 30 minutes
 - "realistic" textures
 - Researching on shaders

03.05.2022

- ~ 30 minutes
 - Better terrain
 - Better movement physics
- ~ 1 hour 1 minutes
 - Editing a duck model with Blender (rigging and modifying the mesh)
 - importing a mesh to godot

04.05.2022

- ~ 1 hour 10 min
 - Animations for the duck model
- $\sim 30 \text{ min}$
 - Enabling the player to change the block type to be placed
- $\sim 15 \text{ min}$
 - changing between the third and first person perspectives

05.05.2022

- $\sim 1 \text{ hour}$
 - Sound effects

14.05.2022

- ~ 40 minutes
 - improving the main menu
 - improving the organization of the project folders