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**Information on My Personal Project, Handmade Hero**

**What is Handmade Hero?**

It is a type of masterclass for game programming. The class is led by a veteran game engine programmer from RAD Game Tools, and has a specific goal. The goal for the project is to create a professional-quality game using C++ and no pre-made code libraries. This game will be a pseudo-3D roguelike that will be randomly generated and contain a lot of objects and entities. It is a free, open-source, and communal learning project. There are more details on <https://handmade.hero.org/>.

**How can I view relevant code to your application?**

To see the complete code for a better view of what I understand, please view the .cpp files in Handmade Hero/code/.

For explanation of code and experience that is relevant for my Diablo – Gameplay application, please view Handmade Hero/diablo\_gameplay\_relevant\_code.cpp.

For explanation of code and experience that is relevant for my Overwatch – Server application, please view Handmade Hero/diablo\_gameplay\_relevant\_code.cpp.

I will be updating the relevant code pages with explanations. Under each header I will give locations of lines to look at in the complete code for convenience.

**How can I download and run the game?**

The game files are located in Handmade Hero/game\_exe.

Download each file in the folder (including ‘handmade.dll’) and place them in the same folder anywhere on your computer.

Unzip the ‘test.zip’ and ‘test2.zip’ folders, since these are textures. Place the unzipped ‘test’ and ‘test2’ folders in the same folder where the ‘win32\_handmade.exe’ and ‘handmade.dll’ is. For reference, your folder should look like the game\_exe folder on GitHub, except ‘test’ and ‘test2’ are open folders instead of zip files.

When the folder is set up, double click ‘win32\_handmade.exe’ to start the game! If everything is working, the textures should appear normally, and you should see a lot of grass. If the textures are not working, you should see a lot of pink on your screen.

When in the game, press SPACE to create a player and move around with WASD. Use the arrow keys to shoot a sword (which is actually a rock), and press SPACE again to jump. Don’t hold jump too long though, or you will advance to the next floor and get stuck. The world goes on for a while and is all randomly generated, so have fun!

If it runs so slowly, that is because the rendering code is slow and not using your graphics card, if you have one. Each pixel is individually put into the screen in order, in the code.

After running it once, the game will output three big storage (.HMI) files in its own folder. Please delete these when you are done to save your storage.

**How long have I been engaging with the project?**

I have been learning from this project for more than a year, and I started since sometime in July 2017. As of 12/7/2018, I am on Day 93, and learning how to scale and rotate bitmaps. Each 1.5 hour-long day takes me around 2.5 hours to finish (because of research, debugging, and typing along.

**When do I find time to follow along with the project?**

Since it is a personal project, and I have many other responsibilities to attend to, I cannot keep pace of one episode daily. I used to take time from the weekends to learn. However, I recently developed a habit of doing at least 30 minutes each day, so that I can sharpen my skills constantly.

**Why do I decide to learn programming in this way?**

Two years ago, when I was 16, I was searching for programming resources to learn from. I desired to learn programming so that I could engineer game and programs that are fast, efficient, and just simply work. However, my high school had no intro classes or established resources to even help start my path, so I had to turn to the Internet. I know I could not ‘self-learn’ efficiently, because programming more complex today. I tried so many resources for learning general Python and C++ from Codecademy and random YouTubers, yet they never motivated my passion, because of their lack of depth. After I found Handmade Hero, the project stood out to me over the rest, because concepts are explained in completely. After all this time, I still have confidence that I am learning how to approaching coding in the way a wise, industry expert would.