



PROJECT: DOOM IMP-ORTER

AUTHOR: TRAVIS BLOCK, TBLOCK@PDX.EDU

GITHUB: [HTTPS://GITHUB.COM/PSUTBLOCK/IMP-ORTER](https://github.com/PSUTBLOCK/IMP-ORTER)

PROJECT TOPIC: FILE MANAGEMENT

PROJECT VISION:

THE PROBLEM:

Despite its age, Doom 2, a video game created by Id Software back in 1995 retains a strong cult following and is highly respected in the gaming industry as being one of the foundational pillars of the modern shooter developed today. The game welcomes modders and those passionate to build off of its foundational gameplay and share them with the community. The issue however is that there are very few ways to manage and handle the mod files (WADS) in an enjoyable manner. Much of which is extracting files from a .zip placing them in a directory and referencing them upon execution of the game's launcher.

THE VISION:

The "Imp-orter" (A play on the name of an enemy found in the Doom franchise) is a solution that provides avid players with a stress free experience of finding new mods, importing and extracting them into a directory, and running them using their preferred Doom launcher. Users will also be able to easily manage their files and delete mods they are no longer interested in.

PROJECT SCOPE:

To keep the project realistic and to prevent bloat, the project is broken into three tiers of completion.

TIER I:

Tier 1 offers the bare minimum experience that I would like to have the users be able to do or experience.

1. The project will have a working GUI. At this time the library/crate I am planning to use is Slint.
2. There will be three sections of the interface
 - a. Home/Main - Acts as a landing page that provides the version information of the project and update messages retrieved from a webpage.

- b. Settings/Setup - This is a configuration page for the user to define paths to directories where their files are and can be referenced by the WAD selection page. Additionally, the page also asks for the path to the users preferred Doom launcher.
- c. Wad Manager - This section of the application will show what files the user has available and where they can select one to launch with their launcher to play the game running the WAD/mod file.

TIER 2:

In addition to the Tier 1 features the core addition to Tier 2 is the added functionality to download the latest mods from <https://www.doomworld.com/>.

Users of the software will have a new panel called 'Browse Doomworld'. This panel will let users browse the latest mods and allow for direct downloading of the files into their defined path. There is a standard file structure on this site where I can then extract the files from their compressed zip. Additionally, metadata can be pulled along with the files to allow the user to learn more about the files they are downloading.

Additional features are also added to help manage the downloaded files. Users can delete files and/or purge their mod directories to start fresh.

TIER 3:

The final tier is the culmination of all tiers and my final piece to the project at this time. Doom mods can be executed and run in batches, providing many ways to customize your experience. In this tier I would try to allow the user to sequence a mod list and execute them with their launcher, generating the ultimate experience or an error log indicating that the particular combination did not work.

CONCERNS:

With Rust being a new language my biggest concerns are the natural errors I will encounter. Reading and writing above all are huge concerns as that is the primary function of this project at its core. Additionally, extracting information from the web and delivering it to the user in the application I foresee being a challenge as well. Naturally scope creep is another concern. That is why I broke down my own expectations into tiers where the first tier being the minimum of what I would be satisfied with.

Another concern is that the mods that are made for Doom are not necessarily uniform. I will have to devise many ways to handle particular file types in order for the mods to run from my own application. The application itself does not run the game it essentially will be executing commands for the system to run the game with the mods as parameters. With that, I can expect that at least one launcher will work with my implementation, but it is possible troubles arise when doing more.

Lastly, finding crates and libraries to use that allow me to perform what I want to do. I have at the very least a GUI library that seems to work pretty well, but I hope it is easy then to work with other things on that same token. I don't know what is available to me in just the standard library and whether it is best to use those tools or something someone else has created. I think this is only solvable with time.