

Implementation

Cohort 3 - Group 4

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We used the following third-party assets and libraries:

- **LibGDX** - Apache Licence 2.0 [1]
- **Game Over** sound effect - CC-BY 3.0 [2]
- **Roguelike Modern City** tileset - CC0 [3]
- **VCR OSD Mono** font - Public domain (unlicensed) [4]
- **Gradle** - Apache Licence 2.0

All of these licences permit us to use these assets in our project. CC BY 3.0 also requires us to acknowledge the original source and authorship of these assets, which we did in the Credits section of the README file in our GitHub repository.

As we are required to use JDK 17, we chose to use Eclipse Temurin JDKs, available under the "GNU General Public License, version 2 with the Classpath Exception" [6]. This means that we are allowed to produce an executable using this JDK, and then copy and redistribute that executable [7].

For our own project, we felt that the MIT[5] licence was the most appropriate. It allows others to use our code, modify it and contribute to it without restrictions. All of the third party assets listed above can be used in a project licensed under the MIT licence.

An alternative choice we could have made is the Apache licence or other, more restrictive, open source licences. We chose the MIT licence over them because it's shorter, easier to understand and puts less restrictions on future users. We decided against using the Creative Commons licences as these do not contain specific provisions about the distribution of source code and their authors recommend not to use them for software development.

In our game we have implemented all features that were required for Assessment 1 and Assessment 2. We didn't implement the following user requirements that we previously elicited:

- **UR_LOCATIONS_UPGRADE** - Buildings may be able to be upgraded to allow additional features or capacity. We didn't implement building tiers, so buildings cannot be upgraded.
- **UR_TOOLTIPS** - The game may have tutorial style messages when users interact with elements for the first time. We feel that the game is already very simple, so instructions on how to click a button would only get in the way.
- **UR_WIN** - As the product brief states that there is no lose condition, the user is not told if they won or lost at the end of the game, as they will always win. Instead, they are shown their satisfaction score and the top 5 leaderboard.
- **UR_ACHIEVEMENTS** - We have implemented achievements, however none of them alter the final satisfaction score.
- **FR_USERNAME** - In our implementation, the user picks their scoreboard username at the end of the game.

References

- [1] “*Apache License, Version 2.0*”, [opensource.org](https://opensource.org/licenses/apache-2-0), <https://opensource.org/licenses/apache-2-0> (accessed 10th November 2024)
- [2] “CC BY 3.0”, [creativecommons.org](https://creativecommons.org/licenses/by/3.0/deed.en), <https://creativecommons.org/licenses/by/3.0/deed.en> (accessed 10th November 2024)
- [3] “CC0”, [creativecommons.org](https://creativecommons.org/public-domain/cc0/), <https://creativecommons.org/public-domain/cc0/> (accessed 9th November 2024)
- [4] “VCR OSD Mono”, [dafont.com](https://www.dafont.com/vcr-osd-mono.font), <https://www.dafont.com/vcr-osd-mono.font> (accessed 10th November 2024)
- [5] “*The MIT License*”, [opensource.org](https://opensource.org/licenses/mit), <https://opensource.org/licenses/mit> (accessed 10th November 2024)
- [6] “*Frequently Asked Questions*”, [adoptium.net](https://adoptium.net/en-GB/docs/faq/), <https://adoptium.net/en-GB/docs/faq/> (accessed 12th January 2025)
- [7] “*GNU General Public License, version 2, with the Classpath Exception (OpenJDK)*”, [eggplantsoftware.com](https://docs.eggplantsoftware.com/performance/license-openjdk-gnu-gpl-v2-ce), <https://docs.eggplantsoftware.com/performance/license-openjdk-gnu-gpl-v2-ce> (accessed 12th January 2025)