

# Implementation

Group 4 - Cohort 2

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## 3rd-Party Libraries and Assets Used

We used several 3rd-party libraries and assets to enhance functionality in the UniSim game system. Below is a list of these resources and their licences:

### 1. LibGDX

The main framework for the game, distributed under the **Apache License 2.0**, which allows us to use, modify, and distribute the software freely, fitting our project's requirements for flexibility.

### 2. Gradle

Used for build automation, managing dependencies, and running tasks. It is also under the **Apache License 2.0**, which suits our need for a consistent build environment.

### 3. Assets

We used graphical assets, icons, music, and map textures from **OpenGameArt** and **Kenney**. Below are the assets and their respective licences:

- **Speech Bubble** - [OpenGameArt \(charlexmachina\)](#), CC BY 4.0.
- **Map Textures** - [OpenGameArt \(isaiah658\)](#), CC0.
- **Background Music** - [OpenGameArt \(mrpoly\)](#), CC BY 4.0.
- **Town Music** - [OpenGameArt \(town music\)](#), CC BY 3.0.
- **Game Icons** - [Kenney](#), CC0.
- **Ending Music** - [OpenGameArt \(chippytoon\)](#), CC BY 3.0.

## Licence Suitability

The **Apache 2.0** and **Creative Commons** licences provide the flexibility we need for educational and non-commercial use, allowing modification and distribution. **Apache 2.0** allows us to freely modify code without requiring open-source distribution, which is suitable for a class project. **CC0** assets are convenient due to no restrictions, and **CC BY** licence only requires attribution, which is manageable for our project.

## Features Not Fully Implemented

The intended feature where fatigue affects the player's ability to move or build (e.g., building slows down if fatigue levels are high) is only partially implemented. The fatigue level is updated, but it currently has no bearing on the game mechanics beyond being displayed in the HUD.