

## **Implementation**

### **Group 27 - WaddleWare Studios**

**James Smith**

**Amanda Ling**

**Fran Medland**

**Hannah Vas**

**James Kellett**

**Malik Tremain**

**Mischa Zaynchkovsky**

### **3rd Party Libraries and Assets**

1. libGDX (<https://libgdx.com>): We used libGDX for most of our game development, using its features such as graphics rendering and game logic. Since it is open source (Apache Licence 2.0), it allowed us to make our game to the requirements without worrying about licencing constraints. libGDX also has extensive documentation that is invaluable.
2. Gradle (<https://gradle.org>): Using Gradle as our build tool helped us streamline development by building the game to a single executable .jar file, this also handled any potential operating system compatibility issues for us. Gradle is also under the Apache 2.0 Licence.

We made sure that any game assets chosen had an appropriate licence. Both map assets listed below are under the [CC0 1.0 Universal](#) licence. This licence grants us the freedom to use, modify, and distribute the assets for commercial or private purposes without requiring attribution.

- Map tiles from <https://kenney-assets.itch.io/rpg-urban-kit>
- Single duck asset modified from <https://caz-creates-games.itch.io/ducky-2>

Font assets:

- OETZTYP font (free licence) from <https://www.fonts4free.net/oetztype-font.html>
  - Bebas Neue Regular font from <https://fonts.adobe.com/fonts/bebas-neue#about-section>
- Bebas Neue Regular has been licensed under the SIL OPEN FONT LICENCE Version 1.1.

The SIL OPEN FONT LICENCE Version 1.1 permits commercial use, modification and distribution of the font, with the restrictions that we may not sublicense the font. We would also be obligated to rename the font and include the full licence if we modify it.

The Apache 2.0 Licence permits commercial use, modification, distribution, and sublicensing. We are obligated to include the full text of the licence in modified software and state significant changes made to the software.

All of the licences used permit the use of their respective software for commercial use. As our use case is private/academic our use of the software is permitted and licensed.

### **Requirements Review**

Most of the requirements we set out to fulfil have been satisfied.

The following have not been met:

- NF\_Music
- NF\_SFX

This means we do not have any sound in our game, this was a low-priority addition that we could implement to make sure the main aspects of the game worked with minimal bugs. This will therefore impact the UR\_Enjoy requirement. However, the user can get enjoyment through other aspects of the game.