

# IMPLEMENTATION

## **GROUP 5 - BITCRUSHED BOB**

Maryam Mathews

Joseph Hinde

Jacob Mace

Will Aston

Zathia Jacquesson-Ahmad

Bulganchimeg Munkhjargal

Evan Weston

# Libraries

## Java Swing Library

The java swing library is a widely-used library for creating user interfaces and dialog. For the surveyor, combination puzzle, and name entry, we needed a system that presented a popup which allows the user to input data into the game. This could have been done using libGDX, but doing so would've required a lot of additional development time for creating a flexible form system that could accept many types of input. Therefore, It was decided that a pre-built library would be more suitable for this. The Swing library was a perfect fit for our use case because it is a widely used library compatible with many devices, is simple and easy to use, and has support for many different user data entry types such as confirmation buttons, radio entries, and text entry. The swing library was also compatible with libGDX as the popup would open in a separate window being able to run independently.

## Badlogic.Ashley

Badlogic.ashley is a ECS library designed to work with libGDX, and is what the previous cohort decided to use as their framework for much of the game systems. In our expansion of the project we also used this library to add new components, entities and functionality not present in the old version.

# Development Tools

## Krita

Krita was used to draw some of the digital art assets, such as the lecturer and safe sprites.

## Tiled

Tiled is a 2d map-creation tool which was used by the previous cohort to create the level art as well as defining boundaries for collision and the location of entities. It continued to be used by us to create additional rooms, place more entities, and to create additional events.

## Assets

We continued to use the 2D art and sound assets that the previous cohort used for our expansion of the project. This included content for extra levels, and some assets which were present in the asset packs that were provided but not used by the previous cohort. Some assets were edited such as the surveyor by modified sprites from the original asset pack i.e. tinting the duck yellow. For any other assets we could not source from the previous cohorts asset packs, we created these assets ourselves using aforementioned tools such as Krita.