

Implementation

Group 9

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For our project, we used a main third-party library for development and several assets to make our game visually engaging and user-friendly. We also made sure to use the convenient licensing terms to make our game accessible for further development.

1. **LibGDX**

For the development of our game, we made use of LibGDX which is an open-source game development library. It provides a reliable framework for 2D game development, which is ideal for our campus builder game.

LibGDX is licensed under the Apache License 2.0 Licence which makes it suitable for our project as it allows us to use, modify, and distribute the library freely.

2. **ChatGPT**

To create the building assets for our game, the pause and play buttons, the start screen background, and the game and team logos, we utilised ChatGPT, an AI generative tool developed by OpenAI whose assets are covered under OpenAI's usage policy. The policy allows us to adapt and integrate the generated assets into our project as long as we give proper credit to the model used.

3. **Audio files (Music)**

We wanted to use background music for both the game screen and the title screen. Both the audio files were obtained from Bensound, a royalty-free music provider (<https://www.bensound.com/royalty-free-music>). As Bensound has a royalty-free licence, it allows us to use those music files in our game with the proper attribution.

4. **Image files**

To enhance the user interface and experience of our game, we used several icons obtained from Verylcon, a free online image source (<https://www.veryicon.com/icons>). Those icons are free for personal and commercial purposes. Some of the icons used in our project include *right-arrow.png* and *left-arrow.png* for browsing different types in the game.

5. **Map and Tileset**

For the map background, we made use of a free and open-source map editor software called Tiled. It allowed us to design and customise our map using an orthogonal tileset. The tileset was sourced from OpenGameArt.org (<https://opengameart.org/content/slides-32x32px-orthogonal-tileset-by-ivan-voiroi>), and it was created by Ivan Voirol. As it was licensed for open use with attribution, we could use the tileset to enhance our game's visual elements while acknowledging the artist.

We believe that we have fully implemented all the features required for Assessment 1.