Implementation

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Implementation references

The game engine we chose to develop our game on was libGDX, including the main library com.badlogic.gdx. This is because it is under the open source license Apache 2.0 [1]. Apache 2.0 is suitable for our needs because it is a no-charge, royalty-free license which saves us from spending any money, as well as allowing us to produce work using libGDX which we can publicly display. This means that when we make our game available to the public, it will still comply with the terms of the license, and will allow any future developers to freely and legally work on our game.

Also to design the graphics of our game we used Tiled, which is licensed under a General Public License [2]. This is suitable for our needs because it is free and open-source, allowing us to use Tiled for whatever purpose we need in our game without having to pay any money.

To make the development of our game easier, and in keeping with the architecture we designed, we used Badlogic.Ashley. Ashley is also licensed under an Apache 2.0 license, which also means that it is free and can be used and publicly distributed by us [1], which makes it convenient for us to use.

When creating the graphics of our game, we used the interiors free and modern interiors asset packers from itch.io. The creator of the assets gave anyone who downloaded the free version of the assets the license to use the assets in a non-commercial product, which our game is. This is in addition to editing any sprites we found in the asset packs and using them in our non-commercial products. The Free-version license was suitable for our needs because it allowed us to use the assets for our game without paying any money, which helped us maintain our constraint requirement CR_SPEND.

For the font in our game menu, we used the Roboto-Regular font from Google fonts. This is licensed under the SIL Open Font License, version 1.1 [3]. This license is suitable for our needs because it allows us to use any unmodified fonts licensed under this license for free, which is helpful for us because it allows us to use the Roboto-Regular font for our game, which we felt is the most suitable without having to pay any money and as we have no intention of modifying the Roboto-Regular font,we are not in danger of breaching the terms of the license.

Finally, for our sound effects, we used sounds from pixabay.com. The content license they use for their sounds allows us to use their sounds for free without attribution [4]. This is suitable for us because we do not have to pay them and we can use their sounds in our game without the additional effort of attributing them in our game.

Un-implemented features

All required features for Assessment 1 have been fully implemented. The game includes one positive, one negative and one hidden event, a functional timer, event tracking, and a complete maze matching our requirements specification. These features behave as described in our architecture and meet the traceability expectations of Assessment 1.

Sources

[1] Apache Software Foundation, "APACHE LICENSE, VERSION 2.0," *Apache.org*, [Online] 2019. https://www.apache.org/licenses/LICENSE-2.0
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https://www.gnu.org/licenses/old-licenses/gpl-2.0.en.html
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[3] "SIL Open Font License Official Text," *openfontlicense.org*. [Online]
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[4] Pixabay, "Content license summary," *Pixabay.com*, 2024. [Online]
https://pixabay.com/service/license-summary/
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