

Implementation

Group 2 - The Debug Thugs

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Third-Party Assets

Asset Name	License	Suitability Discussion
Top Down Pixel Art Horror	Open source, It is free to use for personal use on any engine [1].	This pixel set provides a school horror theme, which is perfect for our game goal for 'escaping uni'. It is free to use and modifications are allowed, meaning it is flexible towards our ideas for the game.
Pixel Art Top Down Basic	Open source, It is free for personal or commercial use [2].	This tile set is perfect for building the outside area of our game. The pack also includes basic sprites, but we have chosen not to use them for the moment.
House Interior Tile Set 32x32	Open source, It is free for commercial and non-commercial use [3].	This pack is very suitable for building the interior of the university. We can use this pack to help build our events. It is modifiable which works well if there is anything we would like to change.
Protagonist Character	The Penzillia Design license grants royalty-free use of purchased assets for private and commercial projects [4].	This sprite is suitable for our game and has been chosen by the team. The license is more complicated for this asset as it requires a two dollar fee [5]. The license states mandatory credit must be given ("Graphics created by Penzillia Design"). The license is non-transferable and requires public project links to be shared with the creator [4].
Free 16-bit Background Music	This music is free to download, but does not explicitly state a license [6].	This 16 bit soundtrack would be suitable for our game as it works well with the game aesthetic we have gone for. After researching the creator's account, there is no information about licensing, so it is assumed it is free for personal use.

It is worth stating that we used copilot, a generative AI, for the following images used in our game: **Enemy.png**, **Key.png**, **Game_Over_Image.png**, **Menu.png**, **white3.png**, **Win.png**. According to the Microsoft website, as we have used the free version of copilot, we are able to use any AI generated images for personal and non-commercial use [7], so we are legally able to use these photos in our project.

Status of Implementation

While we have successfully implemented the majority of the listed requirements, the following requirements have not yet been implemented. This is because it is not required for the assessment one submission and therefore was not a priority for us.

FR_SCORE_TIME	The system shall calculate a base score, where a faster escape time means a higher score.
FR_SCORE_EVENT	The system shall increase or reduce the base score based on event interactions.
FR_GAMBIT_BONUS	The system shall implement optional events that offer the player a score bonus if they accept a challenge.
FR_GAMBIT_SHORTCUT	The system shall implement optional events that offer the player a shortcut if they accept a score penalty.

References

[1] Top Down Pixel Art Horror, AnisAous @ itch.io
<https://kamisama887.itch.io/lorenz-fries-school-horror>

[2] Pixel Art Top Down Basic, Cainos @ itch.io
<https://cainos.itch.io/pixel-art-top-down-basic>

[3] House Interior Tilset 32x32, Graduation-cat @ itch.io
<https://graduation-cat.itch.io/house-interior-tilesset-32x32>

[4] Free Protagonist, Penzilla Design
<https://penzilla.itch.io/protagonist-character>

[5] Receipt showing two dollar proof of purchase from Penzilla Design



Receipt from Penzilla Design

Receipt #1210-9254

AMOUNT PAID	DATE PAID	PAYMENT METHOD
\$2.00	Nov 8, 2025, 1:07:51 PM	VISA - 9018

SUMMARY

Purchase Free Protagonist (Animated Character) by Penzilla \$2.00

Amount paid	\$2.00
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If you have any questions, contact us at privacra@gmail.com or call us at [+45 61 60 99 02](tel:+4561609902).

[6] Free 16-bit background music, Ghayostudio @ itch.io
<https://ghayostudio.itch.io/reitaiadventure?download>

[7] Questions, Microsoft
<https://learn.microsoft.com/en-us/answers/questions/5437846/free-version-of-co-pilot-and-commercial-use>

Kolovos, D. (2025). Project Planning and Risk Management. Department of Computer Science, University of YORK

IEEE (2018) ISO/IEC/IEEE International Standard - System and software engineering life cycle processes - requirement engineering

<https://standards.ieee.org/ieee/29148/6937/>

The Debug Thugs (2025) Escape the Maze - ENG1 Assessment 1 Project Website

<https://thedebugthugs.github.io/>