

# Grave Escape - Phase 4

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## Description

Grave Escape is a Turn-Based Movement Puzzle game, where each move the player makes changes the layout of the level. Players must strategize on how to collect all the keys on each level while avoiding ghosts and traps to make it to the next level.

## Artifacts

To run the game, please open a terminal, change directories to the game folder you have downloaded, and run `java -jar .\target\CMPT276F24_group10-1.0.jar`. This will run the game. For JavaDoc files, these can be found under the directory "`\CMPT276F24_group10\target\site\apidocs\grave_escape`".

## Original Design and Changes Made

Our original idea for the game included a "Slender"-like, horror-themed game with elements of strategy. The strategy part came from the levels being a puzzle of sorts and the enemies, where they would "react" to player movement and move only when the player moves, similar to games like "SUPERHOT". Many of these ideas made it into the final product, such as the reaction-based enemy movement.

However, when it came to ideas that did not make it from the original design, there were a few features that were omitted from the original game design due to them later being found to be unnecessary or due to time constraints.

An example of a feature that didn't make it into our final game was a feature where the player's field of view would originally start almost fully darkened. As the player progressed through the level and mentally mapped it and collected objectives, which were planned to be batteries for a flashlight, the player's field of view would expand because the 'flashlight' gained more power. However, this idea unfortunately had to be scrapped due to technological and time constraints.

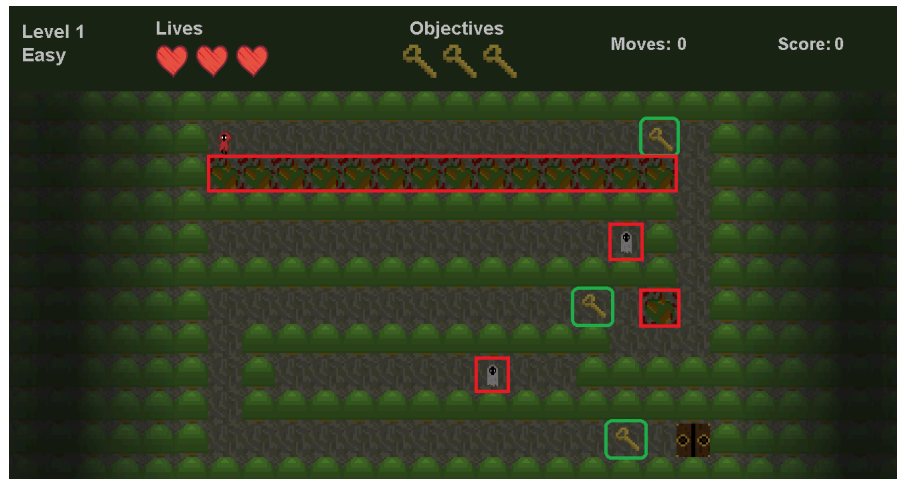
Other changes made throughout the project were the addition and removal of Java classes. When initially planning the designs for our game, the group was not very sure or aware of how we could render the game. However, when it came to Phase 2 of project development, it was clear that we needed an additional class that would handle rendering everything in game. This ended up being *GamePanel.java*'s job.

In the games industry, the final product often has many changes and deviations from the original game design. For us, outside of certain deviations from in-game mechanics, such as the variable player field of view and certain artistic changes, the final game has stayed relatively faithful to the original design. Although we had to make slight tweaks to the final game compared to the original design, mostly being able to stick to the original plan is something that we are proud of.

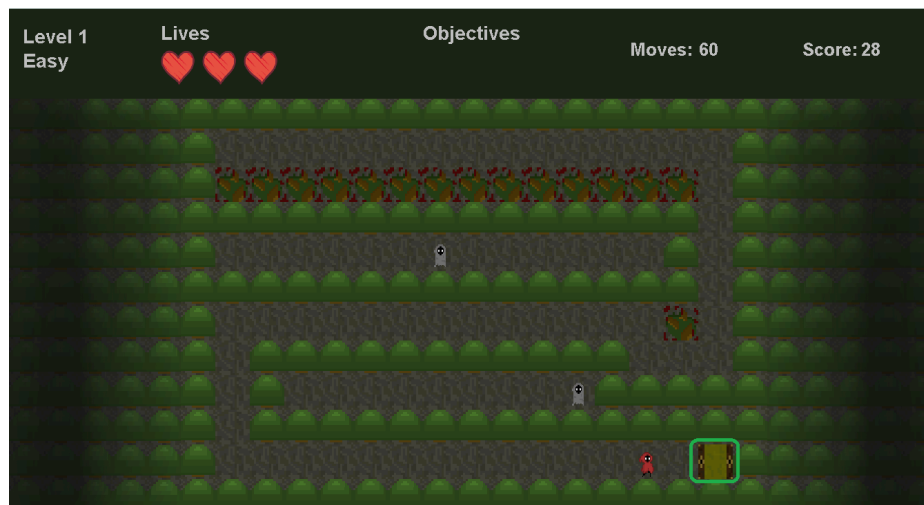
## Tutorial

### Gameplay

To move, players will use the arrow keys around the map to collect the keys (highlighted in green) while trying to avoid ghosts and traps (highlighted in red). Each time a player collides with a ghost or trap, they will lose a life and the level will reset.



Once all keys are collected, the door will open, and the player can move to the open door tile (highlighted in green in the screenshot below) to progress to the next level.



*Once all keys are collected, the door will open (highlighted in green)*

On some levels, you may notice there are additional coin icons (highlighted in green in the screenshot below) on the map. These are optional objectives. These do not have to be collected in order to open the door, but will provide additional points to add to your score.

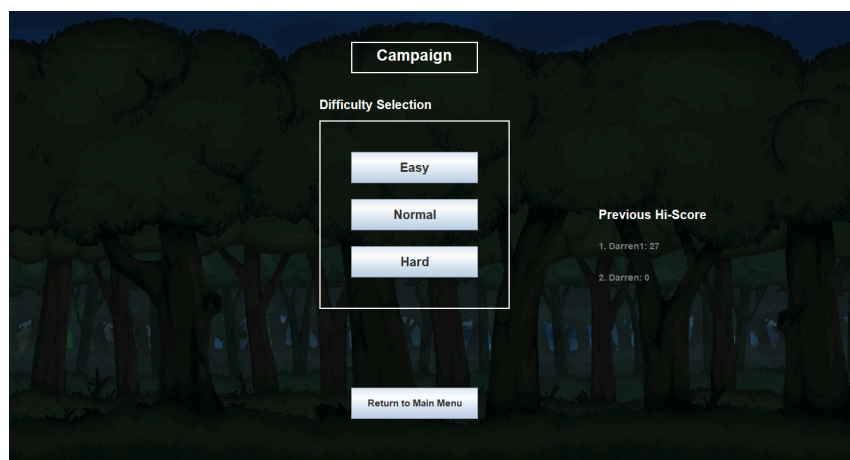


For the scoring system, mandatory objectives (keys) will provide 25 points, while optional objectives (coins) will provide 50 points. However, each move the player moves will subtract a point from your score! Be sure to strategize and make the least amount of moves in each level to maximize your score!

To see how many objectives are left in the level, and how many lives the player has, icons will be present at the UI header. Moves made and the current score the player has are also located on the UI header.

## Game Modes

In Grave Escape, you have the option to select two game modes: Campaign and Practice. In Campaign mode, players attempt to complete three levels of a chosen difficulty (Easy, Normal, or Hard) with three lives. Upon death in Campaign mode, the player will lose a life, and the score and number of moves will be reset to what it was prior to the start of the level. Once players lose all three lives, they will be prompted to enter their name to store their high score and be returned to the main menu. The stored high score can be viewed in the Campaign mode menu.



In Practice mode, players can pick any level, along with a specified difficulty, as a way to practice playing the level without having to play through preceding levels. In this mode however, players will only have one attempt before being sent back to the main menu, and high scores will not be recorded on a leaderboard.

