

Plan and Description

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Overall plan:

Technical tasks – From Professor Alimadadi's Fall 2022 CMPT 276 Phase 1 overview, group 14 will be creating main components for the game requirements consisting of classes for the board, characters, rewards and obstacle objects.

The board will be an NxN grid made by a 2D array, each cell made up of 2 char (2 bytes), to be able to let moving enemy/main character and a trap be together in the same cell, as well as similar classes being represented by a common letter onto the array.

At start of level, main character will start at one corner of board, while exit is at opposite corner. Normal rewards and punishments will be generated randomly on board with no obstacles, while the bonus reward is generated after some time interval onto an empty cell and lasts for 10 seconds.

For the main character class, after detecting first movement input, calculations of the player outcomes will be made relative to their position on the grid. If player's score turns negative from moving onto a trap, player loses, otherwise, remove the trap for level. After, the moving enemies will be calculating the shortest path route, involving the obstacles as unreachable, to move towards the main character. If the shortest path is 1 cell, player loses. Calculations and statements are checked according to the requirements, and if the game is allowed to continue, then the characters and objects will get updated to their new positions on the grid.

Likely risks – After completing each class, there will be risks of prioritizing the valid functions of each class, but not considering edge case scenarios when interacting and implementing with other classes. The group will brainstorm all the edge cases and provide solutions to them as each class is done and implemented.

Resources needed – There will be research on external libraries for sound effects as well as implementing graphics designs onto the grid, characters, and objects.

Work schedule – Each phase is around 2-3 weeks, and the group will have separate tasks. 2-3 meetings a week online/in-person to be up to date of the current progress of the phase.

Description: (Title) is a 2D arcade-style game where the player will be the main character, Squirrel, that will be chased by bears and hunters in a forest. At every level, the forest will be laid in (square) grid and will have obstacles, tree and bushes, and players will need to strategically move to avoid being caught by the enemies. As you avoid bears, also watch out for (cages) set up to trap you and take away points. The game ends early if you are caught or have negative points. Collect the necessary (peanuts) across the forest for some points and to unlock a path to the next level, and limited time (acorns) if you are feeling lucky, for bonus points. After all levels are completed, the timer and final score will be shown.