

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 MxN grid made by a 2D array, each cell a string representing a class, and to be a key to a dictionary that has the value being an array of position on board and class instance name. There is a HashMap to represent a key and its multiple values. Having defined positions inside the HashMap, we can cross-reference interactions when a character moves. Players can change settings and difficulty, and when ready to play, 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 movement input, calculations of the player outcomes will be made relative to their position on the board. 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 board.

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

Resources needed – There will be research on external libraries for sound effects as well as implementing graphics designs onto the map, 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: "Hidden Squirrel: Peanuts and Acorns", is a 2D arcade-style game where the player will be the main character, Squirrel, that will be chased by bears and hunters. The map will be seen as a forest and will have obstacles, tree and bushes, and the player will need to strategically move to avoid being caught by the enemies. As you avoid bears and hunters, also watch out for cages set up as traps, taking away points. The game ends early if you are caught or have negative points. Collect necessary peanuts across the forest for points and to unlock the exit. Grab limited time acorns if you are feeling lucky, for bonus points. After reaching the exit, the final time and score will be shown for players to see how well they did in the game.