

## **Project Title: North Pole Breakout**

**Game Overview:** The North Pole Breakout is a 2D game where players control a main character navigating a maze filled with Christmas-themed barriers, rewards, and enemies. Set in the magical North Pole, the player's objective is to collect all the presents scattered throughout the maze while avoiding dangerous traps like icy puddles and holes, as well as moving enemies such as animated elves. The game offers three difficulty levels—Easy, Medium, and Hard—allowing players to adjust the challenge by increasing the number of enemies, obstacles, and rewards. With Christmas trees serving as barriers and elves chasing the player at every tick, the goal is to gather all presents and reach the exit before running out of points or getting caught.

### **Game Entities:**

- **Main Character:** The player's character starts at the designated start point and can move up, down, left, or right, provided there are no barriers or walls in the way.
- **Rewards:**
  - **Regular Presents:** Collect these to increase the score and progress towards winning.
  - **Bonus Reward:** Occasionally, Rudolph the Reindeer will appear briefly as a bonus reward, granting extra points if collected before disappearing behind the trees.
- **Enemies:**
  - **Moving Elves:** These animated enemies move one cell at each tick, attempting to catch the player. If an elf reaches the player's cell, the game is over.
  - **Traps (Inanimate Punishment):** Static obstacles like icy puddles or holes result in a deduction of points if the player moves onto their cells. If the score drops below zero due to penalties, the player loses.
- **Barriers:** The board features Christmas trees as walls, creating a maze. These block movement for both the player and the enemies. The board has a start point and an end point, with an opening on the boundary walls.

### **Game Interface:**

- **Starting Screen:**
  - **Title:** *North Pole Breakout*
  - **Main Menu:** Options include "Play," "Difficulty (menu)" (Easy, Medium, Hard), and "Quit."
- **In-Game Display:**
  - **Score:** Displays the player's current score based on collected presents and penalties.
  - **Present Count:** Tracks the number of presents collected.
  - **Timer:** Shows the playtime elapsed.
- **End Screen:** After completing the game, players will see an ending screen indicating whether they have won or lost, with options to play again or quit.