# **Mahim Singh**

# **CS 381**

# **Software Development**

# **Prof. John T. Amenyo**

A close up of a sign

Description automatically generated

**Code Intro:**

This is a simple and short C++ code on a console-based game called, “snakes on a train” In this program, I have used the common functions of the C++ library. The very first function on this code is “rand” also known as random number generator. It is used in this program to generate a random type of result for the executed program. I have also used the function of “IF/ELSE” statement because it helps us to an if statement can be followed by an optional else statement, which executes when the boolean expression is false. In this code I have also use the cin/cout function in order to let user input his information and output the executed program result.

**Program Code:**

//

// main.cpp

// game.cpp

//

// Created by Mahim Singh on 10/15/19.

// Copyright © 2019 Mahim Singh. All rights reserved.

//

#include <iostream>

#include <stdlib.h>

#include <unistd.h>

#include <time.h>

using namespace std;

int createSnake()

{

if (rand() % 77 < 10)

return 11;

else

return rand() % 10 + 1;

}

int main()

{

srand(time(NULL));

char enter;

// statistics for the game

int playerAlive = true;

int playerSkill = 11;

int playerScore = 5;

string playerName = "";

int snakeCount = 0;

int snakeKilled = 0;

// Game title

cout << " Welcome to the Game of Snakes on a Train " << endl;

cout << " Please press ENTER to begin..... ";

cin.get();

// player info

cout << " Please type in your name to play the game: ";

cin >> playerName;

// ask how many snakes they want to fight

cout << " Please enter the number of snakes you choose to fight: ";

cin >> snakeCount;

cout << " Get ready to kill the snakes!!! " << playerName << "!" << endl;

// main game loop

while (playerAlive && snakeKilled < snakeCount)

{

// creating a random type of snakes

int snakesSkill = createSnake();

// battle sequence

if (snakesSkill > 5)

{

cout << endl << " Here comes a rattle-snake! " << endl;

}

else

{

cout << endl << " Here comes snake " << snakeKilled + 1 << endl;

}

cout << "Fighting....." << endl;

sleep(2);

// snake killed the player

if (playerSkill < snakesSkill)

{

playerAlive = false;

cout << "You failed to survive." << endl;

}

// player killed the snake

else

{

if (playerSkill - snakesSkill > 7)

{

cout << "You wasted the snake!" << endl;

playerScore = playerScore \* 2;

}

else if (playerSkill - snakesSkill > 5)

{

cout << "You decapitated the snake!" << endl;

playerScore = playerScore \* 2;

}

else if (playerSkill - snakesSkill > 0)

{

cout << "You killed the snake!" << endl;

playerScore = playerScore \* 2;

}

else

{

cout << "You killed the snake, but suffered few minor injuries." << endl;

}

snakeKilled++;

}

cout << endl;

sleep(1);

}

// end game

if (snakeKilled == snakeCount)

{

// victory

cout << "You have survived the nightmare!" << endl;

}

else

{

// lost

cout << "You did not survive the snake war." << endl;

}

cout << "Snakes killed: " << snakeKilled << endl;

cout << "Final score: " << playerScore << endl << endl;

}

**A screenshot of a cell phone

Description automatically generatedOutput Result 1:**

**Output Result Sample 2:**

**A screenshot of a cell phone

Description automatically generated**