C++ Snake Game – One-Page Project Summary

Project Title:
Console-Based Snake Game in C++

Overview:
This project is a classic Snake game implemented in C++ using a text-based console interface. The snake moves within a grid, eats randomly placed fruits, and grows in length while avoiding collisions with its own tail.

Technologies Used:
- Language: C++
- Libraries:
  - <iostream> for input/output
  - <conio.h> for real-time keyboard input
  - <windows.h> for console functions like clearing screen and delay (Sleep)

Game Features:
- Snake head and tail rendering in a 20x20 grid
- Fruit randomly appears on the board
- Snake grows by one unit when a fruit is eaten
- Score increases by 10 with each fruit
- Snake wraps around walls (no border death)
- Game ends when the snake hits its own tail
- Real-time movement using WASD keys
- Press X to exit anytime

Controls:
- W – Up
- S – Down
- A – Left
- D – Right
- X – Exit

Limitations & Scope for Improvement:
- No graphical interface; purely text-based
- No levels or speed progression
- No sound or high score tracking
- Could improve by adding difficulty modes, better UI, and high-score system