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Course Code: CSE 115 | **Group:** 3
Members:

1. Fardin Hossain (ID: 2512532642) - Game Initialization
2. Jayonti Sarkar (ID: 1911069042) - Input Handling
3. Afif Chowdhury (ID: 2513880642) - Snake Mechanics
4. Mohammad Ali (ID: 2512818642)- Rendering System
5. Md Nahim (ID: 2514251042) - Food & Score

Snake Game Project: Progress Report

Project Overview

We developed a terminal-based Snake game in C using a modular design Each team member implemented a critical component, ensuring efficient collaboration. The game features:

- Smooth snake movement
- Food collection & score tracking
- Collision detection (walls/self)
- Stable terminal rendering.

Team Contributions

1. Game Initialization (Fardin Hossain)

Responsibility: Setup game state and control flow.

Key Features:

- Centralized game state management
- Randomized seed initialization via `srand(time(0))`
- Loop timing with `Sleep(200)` for smooth updates

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2. Input Handling (Jayonti Sarkar)

Responsibility: Detect keyboard input for movement.

Key Features:

- **Direction validation** to prevent 180° turns
- **Instant exit** with ‘X’ key
- Responsive input polling using `conio.h`

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3. Snake Mechanics (Afif Chowdhury)
Responsibility: Move snake and detect collisions.

Key Features:

- **O(n) tail movement algorithm**
- **Boundary checks** for walls
- **Self-collision detection** loops

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4. Rendering System (Mohammad Ali)
Responsibility: Display game visuals.

Key Features:

- **Flicker-free updates** via cursor repositioning
- **Dynamic borders** using ASCII characters
- **Real-time score display**

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5. Food & Score (Md Nahim)
Responsibility: Spawn food and update score.

Key Features:

- **Conflict-free food spawning** (avoids snake body)
- **Score increment** system with simple API
