 Channabasvehwara Institute Of Technology

(Affilliated to VTU, Belgaum & Approved by AICTE , New Delhi)

(NAAC Accrediated & ISO 9001:2015 Certified Institution)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Title : Snake Game.

The objective of the game is to control a snake to consume food, grow in length, and avoid collisions with walls and itself. Concepts and Data Structures used are Linked List : The snake body is represented using a linked list data structure. Each node in the linked list represents a segment of the snake, and the linked list allows dynamic growth as the snake consumes food.2D Arrays : A 2D array is used to represent the game board. The array elements store information about the state of each cell, indicating whether it is part of the snake, contains food, or is empty Input Handling : The program utilizes input handling to capture user commands for controlling the snake's direction. The arrow keys (up, down, left, right) are used to navigate.

**Game Mechanics**

Movement :The snake moves through the game board by updating its position based on user input. The linked list is modified accordingly, and the snake's tail is adjusted as it moves.

Food Generation : Random food items are generated on the game board. When the snake consumes food, its length increases, and the player scores points.

Collision Detection : The game incorporates collision detection to identify when the snake collides with walls or itself. In such cases, the game ends, and the player's score is displayed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl.no | Name | USN | Date of Submission | Signature |
| 01 | Ullas | 1CG22IS054 | 19-12-23 |  |
| 02 | Hoysala | 1CG22IS015 | 19-12-23 |  |