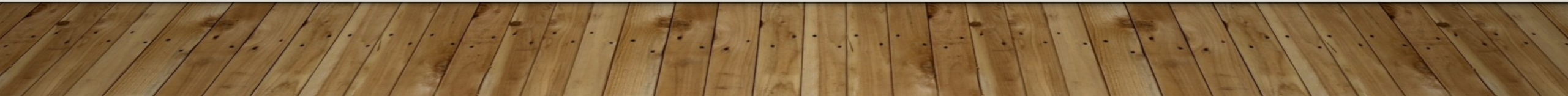


ACCESSIBLE SNAKES-AND- LADDERS

ARCHANA V S

2023



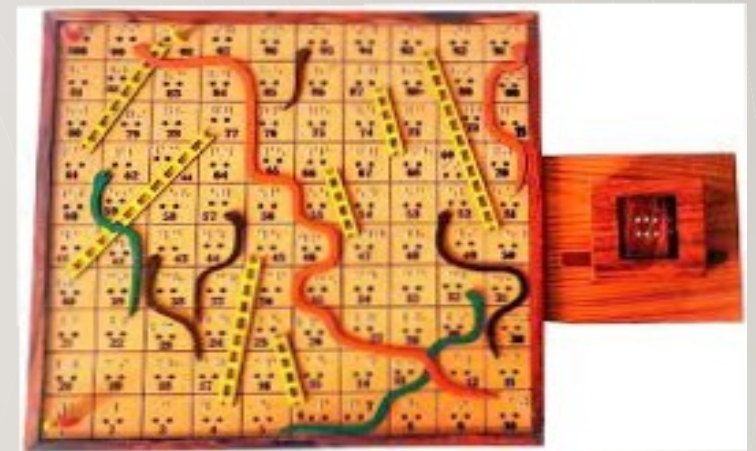
INTRODUCTION

- Games have been an integral part of human culture for centuries. They not only provide entertainment and recreation but also serve as powerful tools for learning, socializing, and fostering a sense of community.
- We have a very few accessible games.

Eg: xboard, tuxmath..

EXISTING SYSTEM AND SOFTWARE

- Braille based snake and Ladder board
- Accessible snake and ladder game is available in windows platform
- But it is not open- source
- It cannot be installed in free and open source operating systems like GNU Linux, it@school etc



RELEVANCE

Limitations of existing software

- The existing software require payment
- No open source software available
- Provides only gaming experience
- Addressing these limitations would require the development of a new software that provide solution to the above limitations

DEVELOPMENT OF SRS

- Blind school visiting
- Interaction with students
- Interaction with teachers
- Discussion with Sathyan sir and Nalin sathyan



PROJECT DEMONSTRATION

Select Player

Choose gameboard :
Board2 ▾

Choose game mode :
Normal mode ▾

Choose the number of players:
2 ▾

Player 1 name
Player 2 name

Start

AboutUser-Guide



FEATURES

- The game provides inclusive gaming experience
- There is options for the players to choose different game boards
- The number of players can be from 1 to 5
- If there is only 1 player he will be playing with computer controlled player
- Players can navigate through game board using left and right arrow keys
- Shortcut keys are provided for announcing snakes and ladders in board and also current position of player

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- There is option for player to choose EDUCATION MODE
 - In education mode , players are asked to answer a question based on their current position and the number on the dice, if they provide correct answer the player can move position, otherwise players are given another chance to answer the question
 - Musics are provided to indicate ladder climbing and snake descending

IMPLEMENTATION DETAILS

- The project is developed in python along with the Gtk Framework
 1. Python has a clear and readable syntax, making it easier to write and understand code.
 2. Extensive libraries and frameworks.
 3. Cross-platform compatibility
- **Why GTK..??**
 1. GTK is free and open source(developed in 1998)
 2. Event handling and user input: G T K provides event-driven programming capabilities, allowing you to handle user interactions effectively.
 3. Widget library: GTK offers a rich set of customizable widgets .



- **Software library**

- utilized the “Cairo library”(developed in 2003) as a powerful 2D graphics tool to enhance the visual aspects of my project
- Cairo provides a wide range of drawing primitives
- Geany is used as IDE
- Git is used as version controller
- Source code is hosted in Git
- <https://github.com/VSarchana/Snake-and-ladder/>



GitHub



GitHub

FUTURE ENHANCEMENT

1. It can be implemented in web based platform. We aim to make game accessible to a broader audience
2. Wider variety of mathematical challenges can be introduced beyond addition.

THANK YOU!!