Project Documentation
of
'Snakes & Ladders'

Course Title: Software Project Lab I
Course Code: SE 2112

Project Title: Snakes & Ladders Game

Project Mentor

Falguni Roy
Lecturer,
IIT, NSTU

Team Members

Abdullah An-Noor
(ASH1825001M)
Foyzul Karim Pathan
(ASH1825033M)
Nadim Bhuiyan
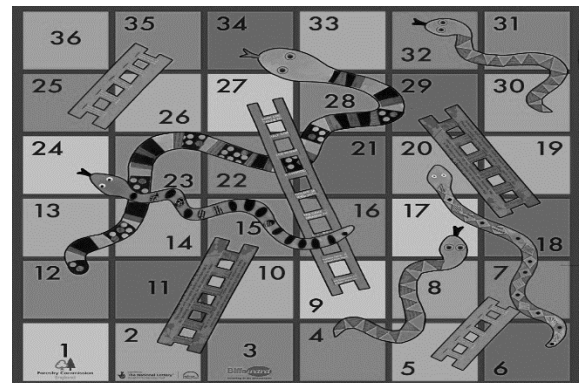(ASH1825034M)

Introduction:

    This is our first software project lab proposal. This project will be developed during the 3rd semester of BSSE 1st Batch, IIT,NSTU, from January 2019 to end of the semester and the final project will be delivered at March 2019. We hope, we will give the half work presentation during the third week of February as directed. We will work along with our regular academic courses. This project is the implementation part of the course Software Project Lab - I.

Title:

    Snakes & Ladders Game

What is Snakes And Ladders?

- Snakes and Ladders is a simple board game, for two to four players, in which the players race their token from start to finish according to dice rolls. It's also known as 'Snake Ludu'

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- The board is a numbered grid squares, on certain squares of the grid are drawn a number of "ladders" and "snakes" connecting two squares together.

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- The size of the grid (most commonly 8×8, 10×10 or 12×12) varies from board to board, as does the exact arrangement of the snakes and the ladders: both of these may affect the duration of game play

History of Snakes And Ladders:

- Snakes and Ladders originated in India as a game based on morality called Vaikuntapaali or Paramapada Sopanam (the ladder to salvation).
- The game was played widely in ancient India by the name of
- Moksha Patamu, the earliest known Jain version Gyanbazi dating back to 16th century.
- Moksha Patamu was perhaps invented by Hindu spiritual teachers to teach children about the effects of good deeds as opposed to bad deeds. The ladders represented virtues such as generosity, faith, humility, etc., and the snakes represented vices such as anger, theft, etc.
- Variations of the game made it to England during the British
- Raj, with one appearing under the name Snakes and Ladders around 1892, which was then patented.

Motivation:

Now a days 'Snakes & Ladders' game has become one of the trendy games. It's very exciting to play in group.Most of us have played the game in our childhood. As we are gonna be software engineers, this is our little attempt to bring back that childhood thrill of the game! Besides its mostly popular to the girls' and womens' to pass their leisure.

This is why we are interested to bring a desktop version of that game.

How to play:

- Select the color you desire to play with.
- Roll the dice by clicking the image of the dice on the righthand side of the window.
- The turn of each player shuffles until we get "one" on the dice.
- When the number in the dice rolls out to be "one", then the

- Active player can take out his button from the start area.
- Then that active player gets another chance to roll the dice.
- The button will be moved automatically, when clicked on it, to the desired block as per the number on the dice.
- Whenever "one " appears on the dice, then the active player gets another chance to roll the dice.
- If "one" doesn't appear on the dice, then the active player gets only a single chance.
- Whenever the button of one player reaches the bottom of a ladder then the player can climb up the ladder to the respective position at the top of the ladder.
- If the button of one player reaches the square with the head of a snake, the player has to retrace back to the square at the tail of the snake.
- If a player rolls three 1s on the die, they return to the beginning of the game and roll again.
- The game is won when the button of a particular player reaches the finish point first.

Game Description:

- 10X10 Colorful Game Board
- 2, 3 and 4 Players Mode
- Single player Mode with Computer
- Moving Snakes and Ladders
- Auto changing game board
- Multi-colored Pawns following selected player mode
- 1-6 pointed moving dice
- Random dice value

<u>Layout concept:</u>

- ❖ The game will start with a graphical animation along with progress bar.
- ❖ In the main screen, there'll 3 Buttons – Play, Help and Exit.
- ❖ Play button will refer to start playing. There will be two option: Single Player which refers to play with computer and Multiplayer which refers to play 2, 3 and 4 players to play together.
- ❖ In Help button there will be included Rules of playing, History of the game and 'About' where there will be information about the developers and contacts.
- ❖ A Congratulations screen will appear when a player will take 1st position
- ❖ Exit option will let the player quitting the game.

<u>Objectives:</u>

Through this project our goal is to learn-

- ✓ Efficient OOP using JAVA, JAVA Swing and GUI.

- ✓ Get better introduced with Desktop Application environment

- ✓ Enrich our Team-work Experience

Things users will find here-

- ▪ Flavor of real 'Snake Ludu' in desktop with attractive graphical interface

- ▪ Extra features added like board changing and moving snake!

- ▪ Leisures will be more exciting!

Scope:

❑ This game will be available on Desktop and PC version only for now.

❑ Later versions may be developed for Android and Facebook!

Deliverables:

✓ *Documentation*

✓ *User Manual*

✓ *Source code*
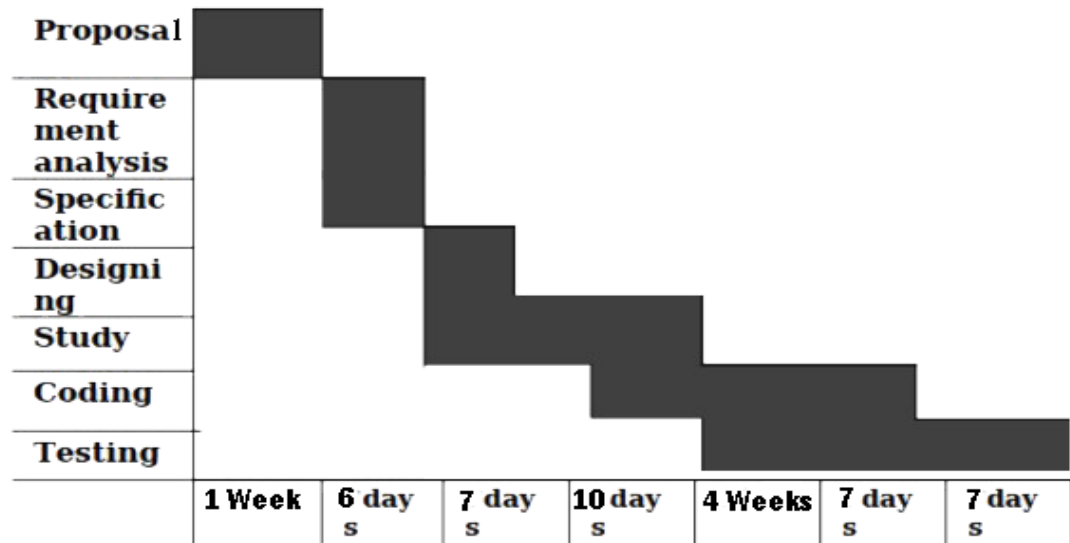
✓ *Executable Application in .jar Format*

✓ *Oral Viva*

Work Distribution:

Task	Active Member
Proposal	Sourav
Requirement Analysis, Specification	Sourav, Pathan, Nadim
Design	Sourav, Pathan, Nadim
Study	Sourav, Pathan, Nadim
Coding	Sourav, Pathan, Nadim
Testing	Sourav, Pathan, Nadim

Proposed Time line:

Task	Deadline
Project Proposal	15th of January
Requirement Analysis, Specification	Within 21st of January
Designing & Study	From 28th of January
Coding	Within 24th of February
Final Testing	From 3rd of March

Time Scale:

	1 Week	6 days	7 days	10 days	4 Weeks	7 days	7 days
Proposal							
Requirement analysis							
Specification							
Designing							
Study							
Coding							
Testing							

Fig: Time Scale

Conclusion

It is very interesting to play your own developed game. It is more interesting to watch anyone else playing your own game. This project will deliver the homemade childhood version of Snake Ladder!

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