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Snake and Ladder

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ABSTRACT

Snake and ladder is well known game among children even among matured people. The rules and regulation of the are as well-known as the game. The case study meant for implementing this game without losing its interesting and attraction. The game is in two modes-two player and one player mode. In the one player the computer itself will act as the second player. The user can interact with the game using either keyboard or mouse. The number and position of the ladder and snake are generated fixed. Random mode numbering is used for user action in which the user is able to place the button long time and the number goes to a loop and when user released the number was displayed.

Keywords: Case study, Information security, Brain-compatible education, Educational game play, Information security education.

1. INTRODUCTION

Although numerous computer languages are used for writing computer applications, the computer programming language, c is the most popular language worldwide. Everything from microcontrollers to operating systems is written in c since it's very flexible and versatile , allowing maximum control with minimal commands. It would be wise to start by learning the c programming language.

C++ is a general purpose programming language. It has the Imperative , object-oriented and generic programming features , while also providing facilities for low-level memory manipulations.In object oriented programming the primary entire of the program is the object. It supports the principles of oops are:

- Classes
- Objects
- Abstraction
- Inheritance
- Encapsulation
- Polymorphism
- Data binding
- Message passing

Snake and ladder is an ancient Indian board game regarded today as a worldwide classic. it is played between two or more players on a game board having numbered, gridded squares . A number of “ladders” and “snakes” are pictured on the board , each connecting two specific board squares. The object of the game is to navigate one's game piece, according to die rolls, from the start (bottom square) to the finish (top square) , helped or hindered by ladders and snakes, respectively.

The researcher infers that snakes and ladders is the game board consists of snakes and ladders. If someone finds a ladder he goes up, but if he finds a snake he goes down. The game is played on a board with numbered grid squares.

- Rules that organize the game.
- Goals and objectives, the players strive to achieve.
- Outcome and feedback, which measure the progress against the goals.
- Conflict, competition, challenge, and opposition leading to players excitement.
- Interaction, the social aspect in the game.
- The representation or story exaggerating interesting aspects of reality.

These six elements need to be carefully designed and combined to create a fun and engaging game. From another perspective, mobile learning (m-learning) refers to the use of mobile devices as learning tools. M-learning covers three different aspects:

- Learning with portable technologies, where the focus is on the technology.
- Learning across contexts, where the focus is on the mobility of the learner, interacting with portable or fixed technology.
- Learning in a mobile society, with a focus on how society, with a focus on how society and its institutions can accommodate and support the learning of an increasingly mobile population.

Algorithm for snake and ladder:

Step 1: start

Step 2: Enter the name of player 1 and player 2.

Step 3: start the game

Step 4: creates a board with snake and ladders on it along with numbers using graphics so that the board will appear on the screen to the start the game.

Step 5: run the dice of player 1 and move the token of layer 1 according to the number on the dice.

Step 6: run the dice of player 2 and move the token of player 2 according to the number on the dice.

Step 7: compare the dice values of each player and then repeat the step 5 and 6 one by one.

Step 8: If player 1 position=100 then player 1 won and end the game.

Step 9: If player 2 position =100 then player 2 won and end the game.

Step 10: stop.

Our task in this project is to implement the interactive game snake. The player controls the direction of the snake using the arrow keys as it continuously moves over a board. The goal is to eat food, which makes the snake bigger. If the snake hits the wall or itself, then it dies and the game ends.

The growth of games on the internet is evidently increasing and there appears to be a close association between play and learning. Computer games enhance learning through visualization, experimentation and creativity of play, and often include problems that develop critical thinking. Many different types of games have been developed such as adventure, simulation, role-playing and strategy games. However, educational researches have concerned on two types: simulation and adventure.

Computer games in education have the ability to bring new and important skills into the learning environment. However, the convergence of computer games and learning is a relatively new phenomenon. Much more needs to be understood about computer games and the child audience, before education is recognized as being a valuable role of computer games in the same way entertainment has already established it. Most learning in the future will occur through a technologically mediated learning/enjoyment combination of experience. The value of game based education is recognized worldwide and can be ascribed to the generation of enhanced involvement of players in the learning process. Active participation is achieve, when the player is enjoying himself while learning. Games effectively generate motive for active participation. Academic research reinforces the logical hypothesis that the learner, with active participation in the learning process, understands and assimilates more information. Given the learner's interest is stimulated, a mass of elements accelerates their learning ability .Snake and ladders game is a simple text based game. It can be implemented using c and C++ or java

Organization of thesis:

The rest of the thesis is organized as follows:

Chapter-2 Illustrate the relevant work on Sorting and snake and ladder game using c and C++.

Chapter-4 Discuss the procedure and implementation.

Chapter-5 concludes the thesis followed by the reference.

2. LITERATURE SURVEY

Snakes and ladder is a game that has been around for a longest of time, unknown of the inventor, It is believed the game was played at a time as early as 2nd century BC. Since then, the game gained popularity for its playing system with vipers that denotes the players piece contrasting with the ladders that promotes to higher number plates. It is predated yet an interesting game for users to learn and be entertained. And as for programmers, it is a great way to begin the venture in coding, sequential processing of data's and abstraction on different functions to work together to form a unit.

After the popularity of computers sprang in the world, snakes and ladders was transformed to a computer game which had the same characteristics, only with automation controlling the dice. In the present paper the role attached with the project and the game itself is investigated.

The following are three literature review attempt to demonstrate and support the grounds for the game snakes and ladders.

In the article by Ullas Krishnan (2014), the writer works with creating graphics of great complexity and elucidates the enormity of the graphics in the digital front. The screen splash idea of the snake was a basic use of basic functions like rectangle, line to and fillpattern.

In another article, vamsi sangam (2014), a programmer from Indian institute of information technology details the working behind the movements behind the player pieces synchronizing with the number on the dice.

Lastly in the website, code with c (2015), an article with the same dealing of the game demonstrated the logic on the movement of pieces, when in the plate of ladder or snakes head. It delineates the process of the return and proceed by jumping the remaining tracks in between the ladder or the snake.

Taken together, all the findings from the articles, the project outcome indicates that programming games or any other software is the careful use of logic and functions.

Snakes and ladders is a chance game played usually by more then one player (and less then 6). However, while playing alone might seem lonely, it is still possible. In general it is played on a 10x10 board. Each square on the board is numbered from one to one hundred. Again board must not necessary be composed of ten by ten squares as anything more than two by two is workable. However, this might make the game extremely short. First square is starting position, the 100th square is where players finish. Furthermore, there are a number amount of snakes and ladders placed along the board. Any snake or a ladder is basically a line, whether it is curvy or not, that is connecting two game squares. Ladder starts at a square which ID is lower then the one it finishes at. Snakes backwards. Players use single die and different counters or any other objects that fits on the square.

Once players have established who starts first. The first player roles the die and moves its piece by the number the die turned out starting from the square 1. Afterwards others do the same in a loop until someone reaches 100th square or throws more than that. If meanwhile player lands on the beginning of a snake or a ladder they have to move along to the end of it and pass the turn to the others.

In addition, in English Collins dictionary states that snakes and ladders is a British, a game played with a board and dice. When you go up a ladder, you progress quickly. When you go down a snake, you go backwards. Beside in the oxford advanced learner's dictionary definite that snakes and ladders is a children game played on a special board with pictures of snake and ladders board on it. Players move their pieces up the ladder to go forward and down the snakes to go back.

The game has been developed by the Hindus to teach their children as a lesson of morality whereby the snakes are bad omens and the staircase presents good values. Then the game has become part of the traditional game in Indonesia although there is no detailed information about its emergence in Indonesia. This game can also be used as a tool to educate, entertain and to build up interactive communication among the players. Arinil janah (2009) had conducted a research on the use of snake and ladder game in class to enhance students understanding in learning at one of the schools in Indonesia. The study involved the students in primary two of the school. The results shown is that snake and ladders game successfully enhance students' active participation and be expressive learning. In addition, learning becomes fun with the use of media-learning. Snake and ladder is a kind of educational game that purpose on exercising students rapidly in speaking. This game requires some kind of tool among others board, snake

and ladder are equipped image paper, and dice. Teacher can make the dice by herself in English number (mujib and rahmawati: 2011).

3. PROPOSED METHODOLOGY



Figure-1 Open Turbo C++

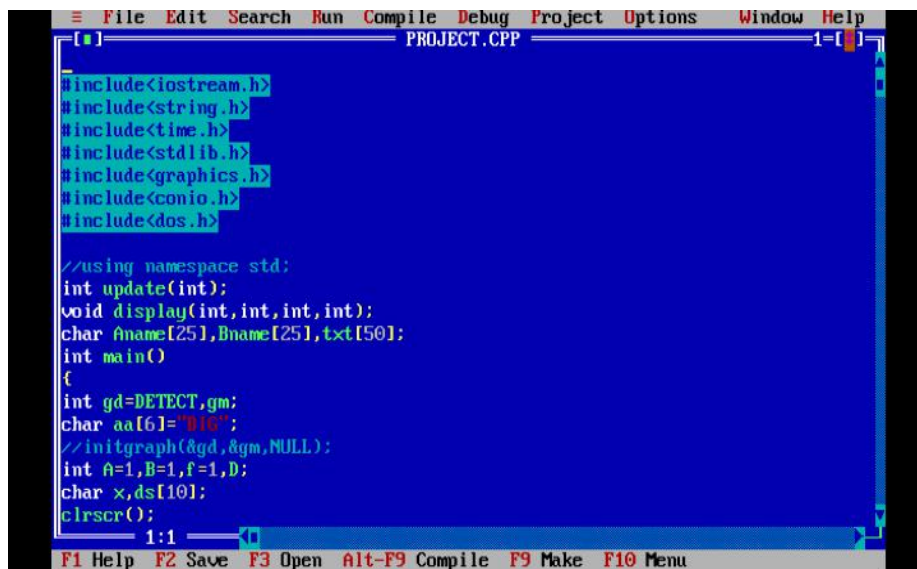


Figure-2 Open New File

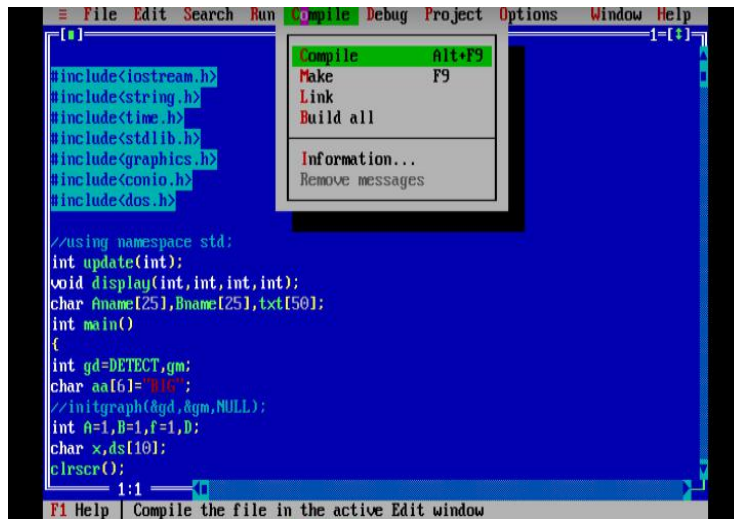


Figure-3 Compile the Program

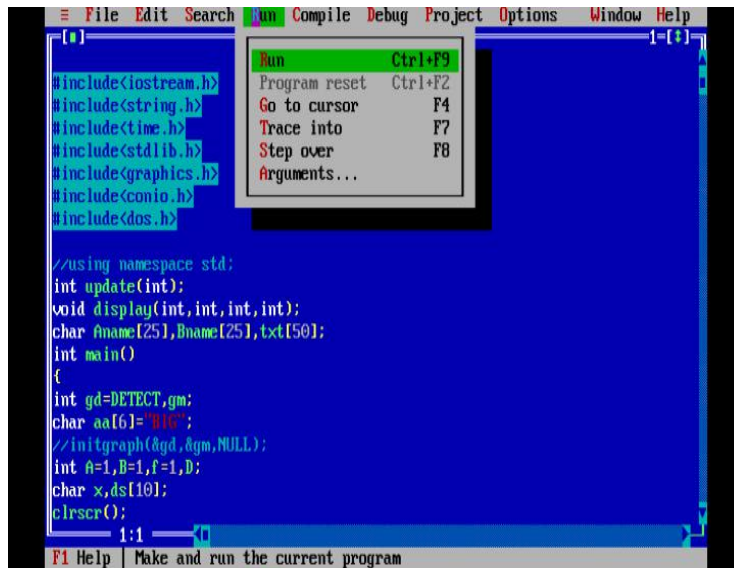


Figure-4 Run the Program

4. RESULTS AND DISCUSSION

The process of testing has started with the testing of individual program units such as functions and objects. The ultimate goal of testing process is too establish confidence that The project is “fit to the purpose”.

The level of required confidence depends on the project purpose, the expectations of its users. The software testing involves compiling and executing the code. In this project as specified earlier we are compiling the code using turbo C++.



Figure-6 Entering The Players Name

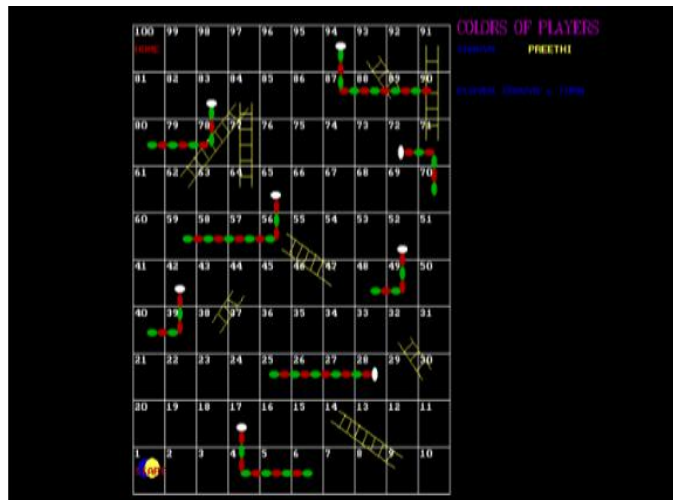


Figure-7 Start Playing Game

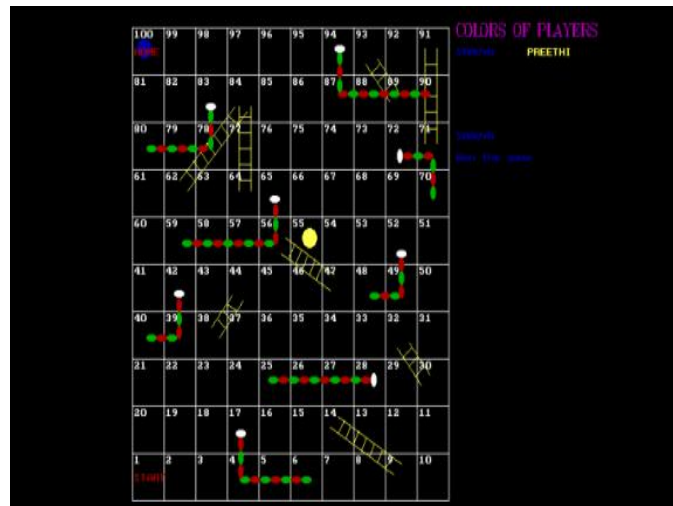


Figure- 8 End Of The Game

5. CONCLUSION

The Project was started with modest aim with no prior experience in any programming as this ,but ended up in learning many things ,fine tuning the programming skills ad getting into the programming world. This is a simple game project that everyone will enjoy playing it.

It is extremely friendly and has the features which make simple graphics project. This game can be played by only 2 persons. Therefore the code can be enhanced and many more features can be added such as involving more players etc....

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