

POOL GAME

CS-101 Software System Project

Team ID-115

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Problem Statement

- As the name depicts this project is all about making a single player pool game using SIMPLECPP Graphics .
- Writing the code for the game is relatively simple for beginners using structures , classes and functions.

Our various aims are / were:

Problem Statement

- Learn about the concepts of classes , structures and graphics.
- To make the most out of the most basic functions like loops and `initCanvas()`.
- Making the user interface much interactive so as the one playing enjoys the game.

Problem Statement

- Other aims were calculating the high score(no. of strokes),creating playing modes i.e. hard and easy.The only difference between these options is speed of cue ball. In easy mode speed of cue ball increases and hence random motion increases and probability of pocketing goes up.

Challenges

- Initially developing the code using classes and structures was bit difficult but we sorted it out later after it was taught in the class.
- Also we faced a challenge regarding movement of multiple balls simultaneously in the Canvas window.
We found out a solution to that problem.
- Apart from these the game was completed patiently and with full enthusiasm.

IMPLEMENTATION

- The first task was to code for the table and balls. Rectangle ,circle features in simplecpp were used.
- Structure was defined for Ball having elements as Circle ,Velocity.
- Getclick() was used to accomplish the goal of ball movement.
- The balls are kept moving all the time.Balls having zero velocity appear to be stationary.

IMPLEMENTATION

- Other functions are distance between ball, a function that checks whether all balls are stationary so as to prompt the user for next click and no. of balls pocketed.
- HighScore was implemented by creating a text file “highscore.txt” and using I/O stream to keep count of highscore.
Everything else is just the basic Simplecpp Graphics. 😊

INNOVATIONS

- We have completed the project just using Simplecpp graphics library which is somewhat unique.
- In the easy mode the velocity is high which gives the user a feel of playing table similar to air hockey with reduced friction.

PROJECT SCREENSHOTS

Main Window

NEW GAME

OPTION

INSTRUCTION

HIGH SCORE

EXIT

Instruction Window

BACK

Straight Pool:

The object of this game is to pocket every ball on the table, with the exception of the cue ball, using as few strokes as possible.

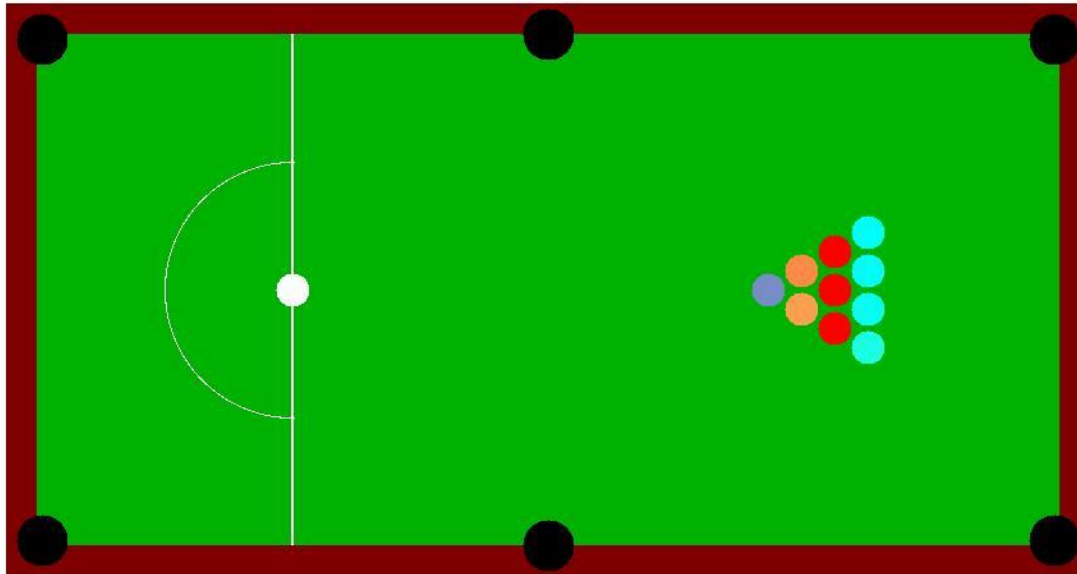
The order of pocketing is free. If the cue ball is pocketed, ball in hand is given and, as a penalty, one of the previously pocketed balls is placed back on the table.

Movement of the ball:

Speed and direction is controlled by forcing the ball to move in the click direction and speed depends on the distance of click from cue ball.

Playing Arena

Main Menu



FUTURE PROSPECTS

- Different playing modes can be added such as-
- **Free Training**
- **Rotation**
- **Straight Pool 99**
- **Continuous**
 - (These modes are explained in the report)

Future Prospects

- Our game has nice functionality and like millions of other games in this world has a sole responsibility to entertain the users.
- 3D graphics,multiplayer,sound effects mode can be involved later so as to make the game addictive.
- Apart from all this a game as such is merely to have fun and we are trying our best to ensure you of that. 😊

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Thank You