CS-154 : PROJECT REPORT

— Prof.Amitabha Sanyal SEMESTER : SPRING 2018–19

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THREE SIMPLE GAMES

1.MINESWEEPER 2.SUDOKU-GAME 3.PING-PONG

DESCRIPTION :

1. **SUDOKU :** It produces a sudoku puzzle from it's library of unsolved Sudoku puzzles (in form of list of list -rows).The user has to solve the puzzle provided at UI in form of editable grid.
2. **MINESWEEPER :** It is a DrRacket version of the classical windows version of Minesweeper with all typical functions except for flagging and timer.
3. **PING-PONG :** It includes both one-player and two-player versions.In this Game players can control a paddle and hit a ball moving between them.Winner needs 10 points (arbitrary).

LIMITATIONS AND BUGS :

1. **SUDOKU :** The grid size is actually customisable ,but due to the 16 grid and 25 square grid versions of sudoku-solver being not available it's limited to 9X9 grid ; The other limitation is that the examples are limited.Also the that sudoku Examples must be correct questions to get a puzzle at UI.
2. **MINESWEEPER :** The first attempt of opening is based on luck ; except that the game is still logical and We thought of interface but couldn't do it in time; so the game goes without the interface.

3. **PING-PONG :** In the single player version of the game the computer almost never loses and as the game progresses the ball speed may increase to such an extent that pad can't keep up with it.

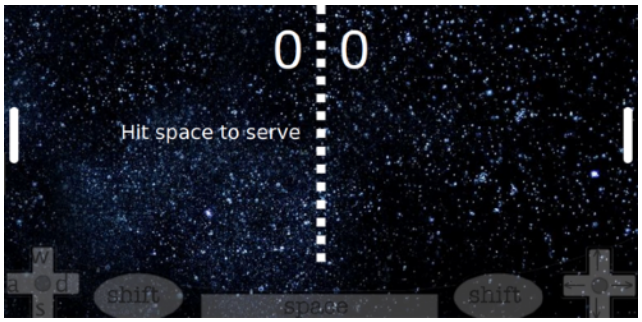
DESIGN OF THE PROGRAMS :

1. **SUDOKU :** We have made Ingame_common.rkt and Outgame _common.rkt to easily implement sudoku, minesweeper, tic-tac-toe, chain_reaction ,etc. with reduced difficulty as these are the things that are in common to most of the grid games.We have used structs extensively for world, grid, buttons , block and made a better UI.The parameters like colours , difficulty can be set and high score can be reset.
2. **PING-PONG :** We have used structs extensively in every part of this game.The speed of ball and angle of deflection increases as we hit the ball away from the centre of the paddle , making it more realistic.
3. **MINESWEEPER :** We used r-sound module to make sound for every click or blast or win ; to make it more stimulating .It's Otherwise almost same as any classical minesweeper game.

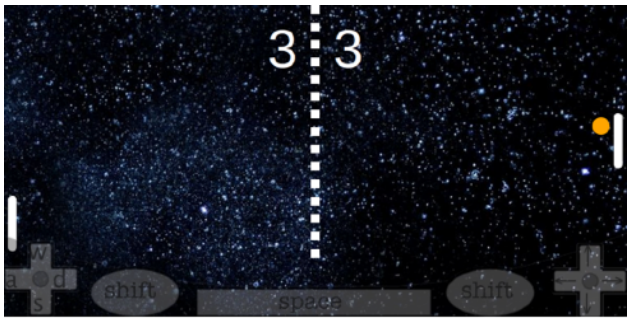
SAMPLE IMPUT AND OUTPUTS :

The SUDOKU (all game no input); It gives a game on directly running the NewSudoku.rkt ; the PING-PONG starts on directly running either of mypong.rkt or _mycomppong.rkt .while the MINESWEEPER starts on directly running mine-graphics.rkt .

IN – GAME – SCENES :



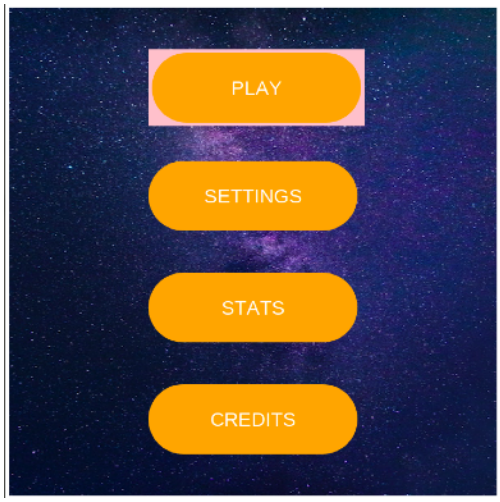
START : PING PONG



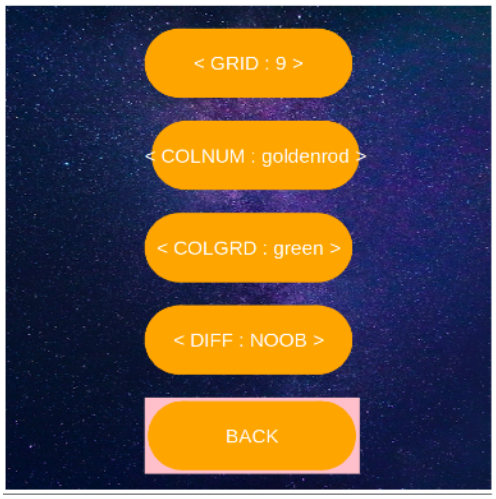
DURING GAME : PIN PONG

PLAYER END : PING PONG.

ON TYPING ESC : PIN PONG

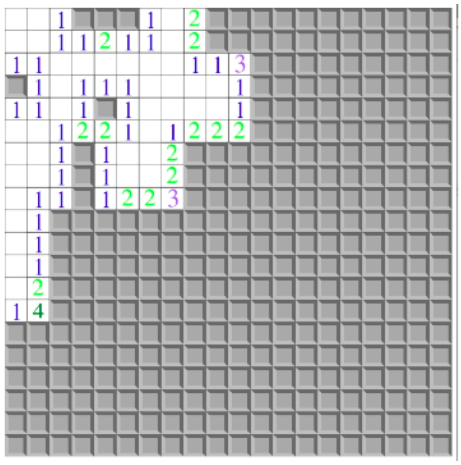


START : SUDOKU

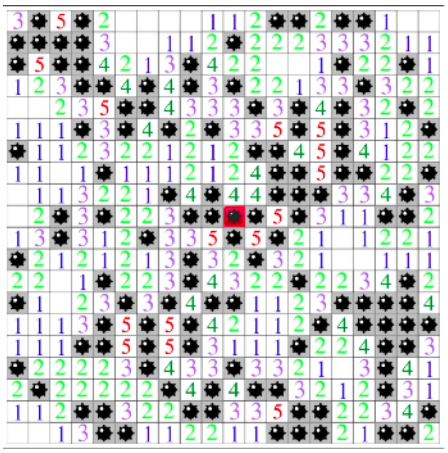


SETTINGS : SUDOKU

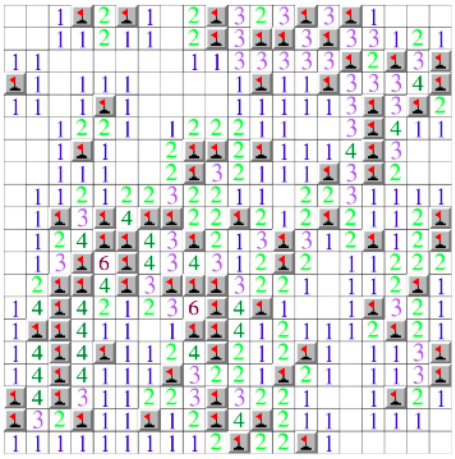
GAME : SUDOKU



GAME : MINESWEEPER



END-LOSE : MINESWEEPER



END-WIN : MINESWEEPER

CREDITS :

1. MINESWEEPER : We took the windows version of the game as model and tried to imitate it as closely as possible.
2. PING-PONG : We have taken the ideas (not copied) from some codes of github to implement some parts of our code.