

Shiwangi Mishra - SM9175

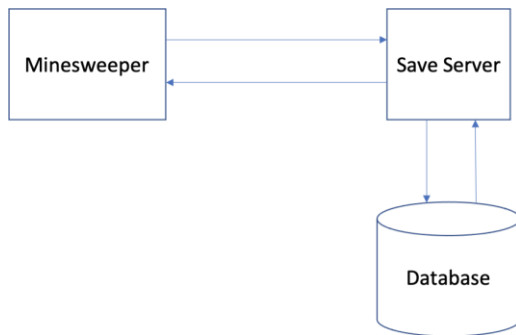
CS9053 Section I2 - Intro to Java

Final Project Report

05/14/2021

<u>Project Architecture</u>	<u>3</u>
<u>Database Design</u>	<u>4</u>
<u>Game Screens</u>	<u>5</u>
<u>Extra Feature</u>	<u>9</u>

Project Architecture

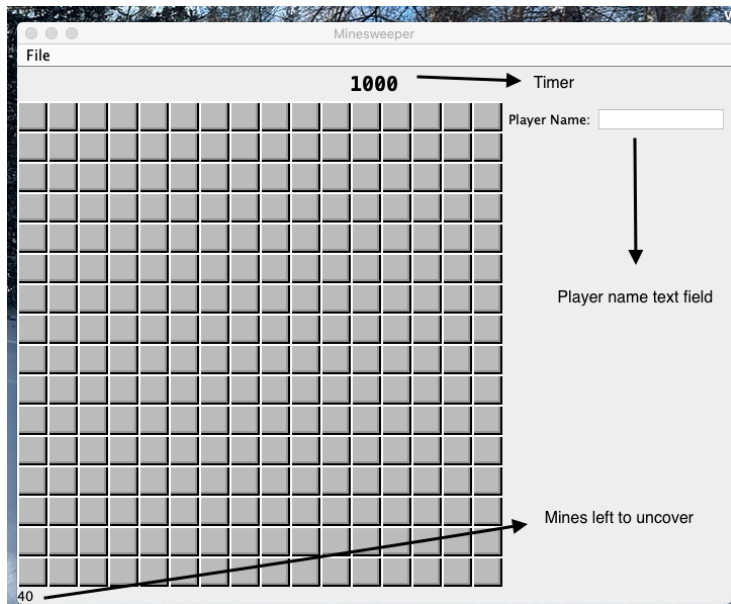


Database Design

Create Table Create Index Print		
Name	Type	Schema
Tables (2)		
ms_history		CREATE TABLE "ms_history" ("id" INTEGER, "name" TEXT, "saved_ts" TEXT NOT NULL DEFAULT '(datetime("now","localtime"))', "game_state_data" TEXT NOT NULL, PRIMARY KEY("id" AUTOINCREMENT))
id	INTEGER	"id" INTEGER
name	TEXT	"name" TEXT
saved_ts	TEXT	"saved_ts" TEXT NOT NULL DEFAULT '(datetime("now","localtime"))'
game_state_data	TEXT	"game_state_data" TEXT NOT NULL
sglite_sequence		CREATE TABLE sglite_sequence(name,seq)
name		"name"
seq		"seq"
Indices (0)		
Views (0)		
Triggers (0)		

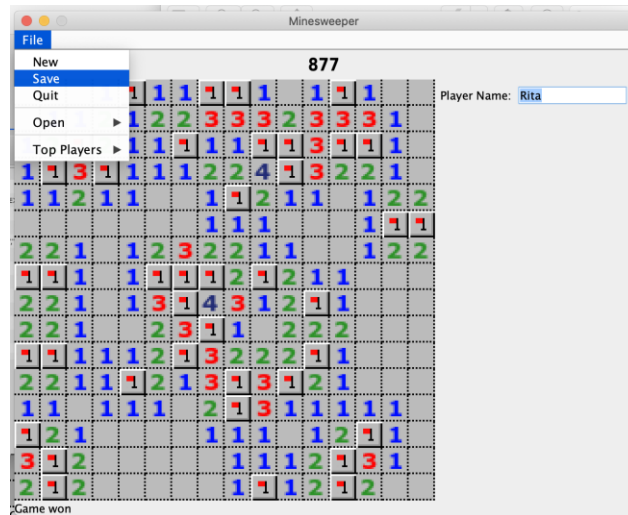
- As described above, this project's Database name is MineSweeper.db
- It has one table "ms_history"
 - Every time we save a game it will be stored as new record in this table.
 - Column 'Id' is used to store unique "id" of each saved game instance in this table
 - Column "Name" is used to store the player's name if available.
 - Column "saved_ts" is used to store the time stamp, when game was saved by the player.
 - Game State Data is used to store the game object which contains Game Board state(cells' value) to reconstruct the grid on load, time taken by player and whether player lost the game or won or in game is in progress and few more details.

Game Screens:

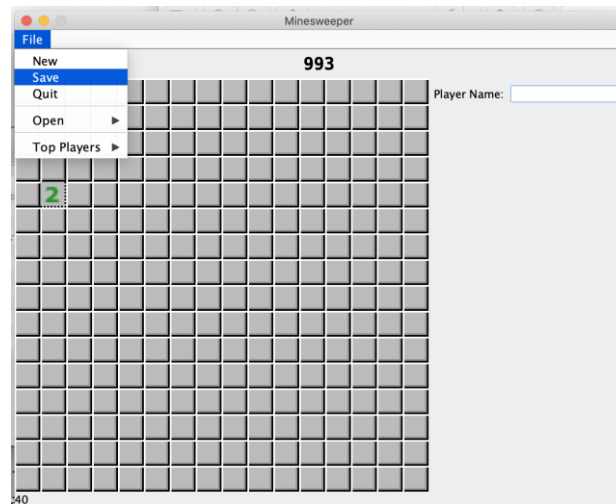


Save Game:

Game Saved for Player Named Rita by entering player name in text box.



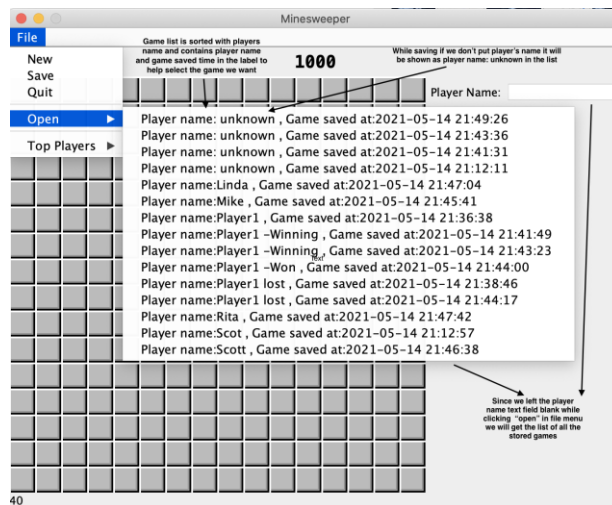
Game Saved with player name blank



Load Saved Games:

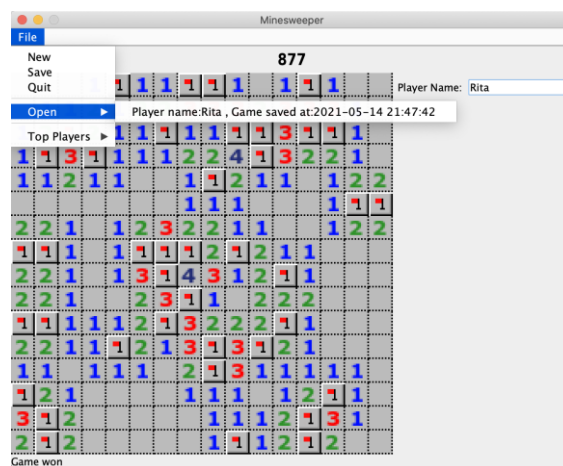
On load list is sorted by player's name ascending

Load all saved games



Load saved games for specific player

Since I entered "Rita" in text box while clicking "Open" only games stored against her name are shown in the list.

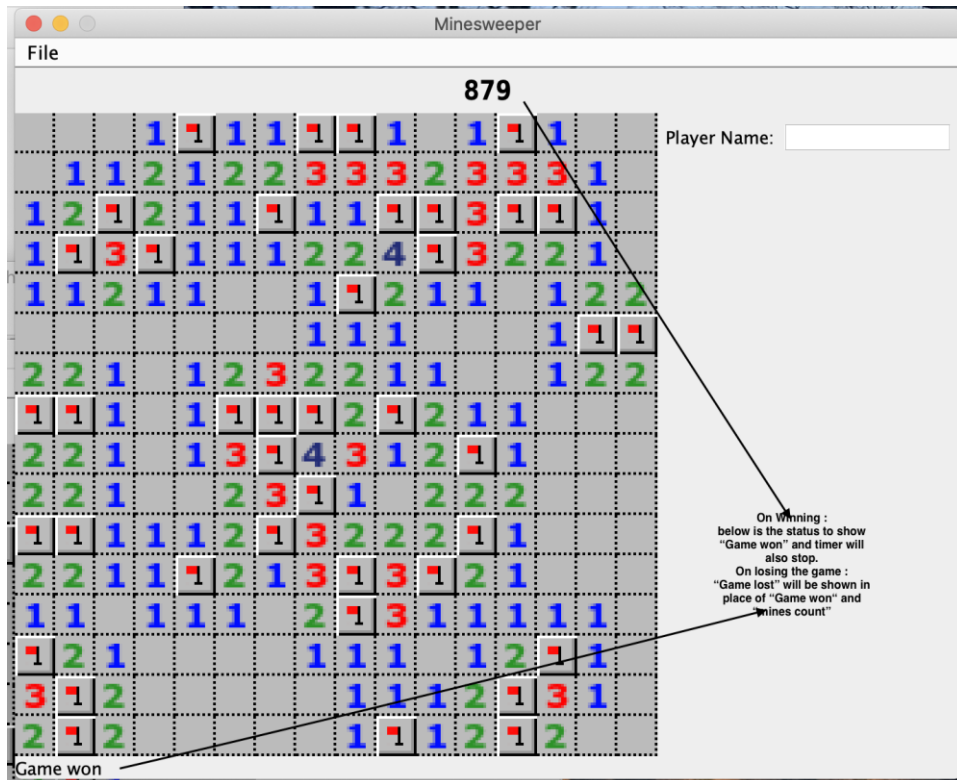


Game progress

On Winning below is the status to show "Game won" and timer will also stop.

On losing the game "Game lost" will be shown in place of "Game won" and "mines count". Timer will also stop.

If Game in progress "Mines Count" in place of "game won or lost" will be shown. Timer will continue until game is over.



Extra Features

Top Players Board

On click of **Top Players** Options in the menu, anyone can see the top five Players.

Top five Player name with their top score is displayed.

To load these games, we can enter the Top Player Name in the Player name text box and click on open menu option. The list of games played by that user will be shown, and we can load the game from there.

If Player Name is not available (Unknown), we can leave the textbox blank and click on open to select the game.

