" REQUIREMNET SPECIFICATIONS FOR A CHECKERS GAME "

By :- Team Iconic

Dated :- 01st November , 2022

Mentor :- Mr. Nitin Bhide

1. Requirements Analysis :-

i.) Checkers, also known as draughts, is a group of strategy board games for two players which involve diagonal moves of uniform game pieces and mandatory captures by jumping over opponent pieces.

ii.) Aiming to develop 'Checkers' board game desktop application in which two human players will play against each other and computer will decide the valid move also computer will detect and declare the winner.

iii.) The problems a user can face about the game is if he or she wants to save a game that is going on at an intermediate stage and he wants to save the game. A user wants to view the history of the games he has played and if users are looking for online tournaments which is not available on a broader scale.

iv.) We are looking forward for creating a desktop application that can be used by any user irrespective of their age group where we can use the real-time databases to save the intermediate stage at which the user exits the game. Databases can

also used to save the history of the games played by the user and can be accessed by him. Real time APIs can be used to organize contests.

v.) The main objective of this project is going to be to develop a platform where people can come together to play the game which is going to have all the basic features such as saving the game , viewing the history of the game played by a particular user, detecting valid and invalid moves , etc.

vi.) This product can be declared as a success if it people are able to execute each and every feature of the application and if we are able to communicate with the users and organize a contest .

vii.) Ramesh is tried after working whole day in the office and wants to relax he wants to play a sort of brainstorming game with his son Rahul. Ramesh wants to play a fair game where only valid moves are allowed and he wants to save the game at the intermediate stage . Ramesh is also looking forward to participate in contest where he can win exciting rewards . Ramesh also wants to view the history of the games played.

<mark>Technical Specifications :-</mark>   Organizing contests and bringing the users on a single platform using real-time java APIs.

viii.) There may be many precedents of this application which are available worldwide. Our app in the version 1.0 is going to be the same as its precedents app and version 2.0 will create some features that will differentiate our application from others. We can introduce 8x8 , 10x10 and 12x12 format of checkers game on a single platform and many more to add on.

2 . Intended Audience and Intended Use :-

This Software requirement document can be accessible by my team's developer , testers , project mentor , testers and the team leader. This document will give a brief overview of our project and help the individual to understand the requirements.

3. Product Scope :-

The main objective of this project is to help people relax and play a sort of brainstorming game that will not only make this feel relaxed after their daily routine but also enhance the minds. This product can be introduced on a local level and maximum profit can be earned when it is made flexible for the people to use.

4. Definitions and Acronyms :-

i.) The risk in this project can be stated as the failure in the server when two people try to connect .

ii.) Sometimes when the user traffic is quite large app may not be able to handle the user traffic effectively.

5. User Needs :-

The given product can be used by any person locally irrespective of their age group. They will use the product as a primary user. Basically it is going to be a desktop application that can be used as any other application which is already available in the market.

6. Assumptions and Dependencies :-

We can assume the fact that we are going to use the latest technology that is currently available and is efficient in making the application user friendly . Currently we will be basing thing for windows framework. These assumptions can be taken into account if our product fails to deliver.

7. Functional Requirements :-

I.) Two human players will play.

II) Game will be displayed on screen

III) It should be possible to save intermediate state of the game and resume the game from this saved state.

IV.) Set of rules of the game will be displayed.

V.) Valid moves will be detected by the computer and warning will be issued if there is an invalid move.

VI.) History of the previous games played by the user will be displayed.

VII.) A leaderboard can also be made by the sorting the people on the basis of most number of matches won.

VIII.) A google account can be used to login into the game and save the data.

IX.) Currency system and different themes can also be added in the product.

X.) Some contests can also be organized between multiple users.

8. External Interface Requirements :-

User :- All the people of different age groups.

Hardware :- It can be accessed by laptops or PCs.

Software :- Windows

Communications :- Different APIs

9. Technical Specifications :-

Hardware details
i.) which processor :- i3 or above
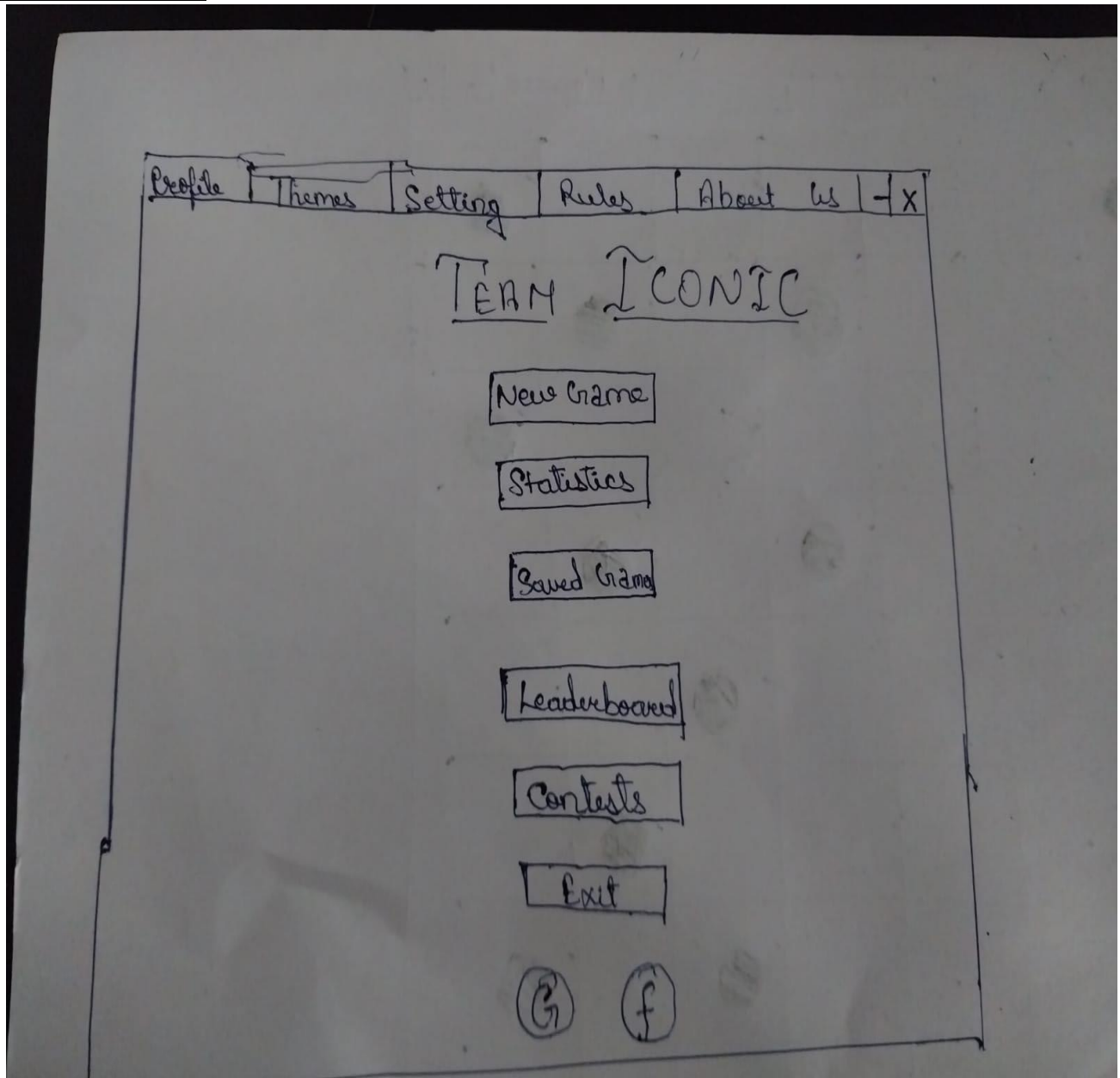ii.) Operating System :- Windows 7 or above
iii.) Performance
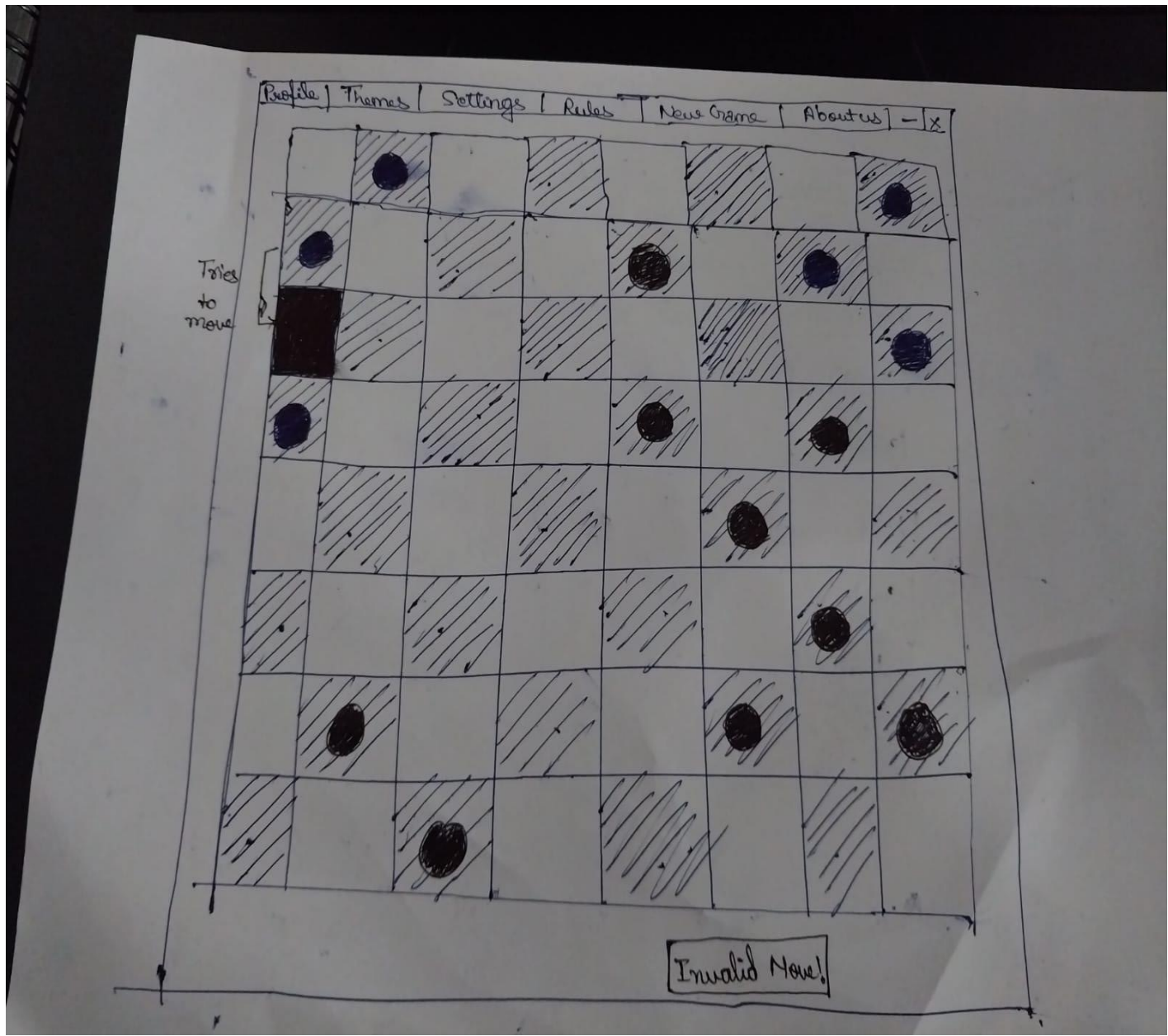expected power consumption :- 10 to 15 per cent /- hour (varies from pc to pc)
 iv.) Ram :- 1GB or above
 v.) Database :- Firebase or TextFile.

10. UI Designs:-

Next phase :-

11. Future Specifications :-

i.)   All the forms of 8x8 , 10x10 and 12x12 can be implemented on a single platform.

ii.)   AI can be introduced for Computer vs Human mode.

iii.)   Online multiplayer option can also be introduced.