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Online Chess Masters Club

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Abstract—The paper presents an online chess game which provides human to human facility. In which the players are not required to be of the same region i.e. players could be from any city, country or continent. In offline chess game, players should be from same place in fact on same pc. In this application, players only have to register and after that they get unique id, by using that id you will login to the application, where the players have to only search for online registered users and then send them request to play with them. Your moves and another player's moves are recorded and will be shown in the panel which is placed near chessboard.

Keywords—Chess gameregistration, Profile management, Rational rose, Activities management.

I. INTRODUCTION

Chess game is already developed game but it is offline game i.e. the player can play with computer or with human but the restriction is it should be played on single or same computer. In online chess game player can play with other players which are unknown for him. In online chess game, you have to first register yourself by filling a simple form with basic information. Then administrator gives unique id and password to that registered user. By using the unique id user will log in to the main browser page of chess. The main browser contains chessboard with side panel. On chessboard, side players will play there traditional game and their moves will be display in panel. The whole game will be saved in the database for future reference. In online chess board, one facility is provided that if one player plays one move then he will have to wait till another player's move. There is no bound for time. Game will be automatically saved in database so it will restart from that point only when you left that game.

II. BACKGROUND

A. Existing Systems

Existing systems of chess are chess, computer chess game i.e offline chess game. Chess played by two players which are physically present there and sit in front of each other. In offline chess game, player can play with computer and also user to user.

B. Drawback Of Existing System

In chess game, essential factor is both players should be present there physically which is its drawback. In offline chess game, essential factor is both the modes i.e computer to user & user to user should be played on same computer which is the drawback of this game.

III. AIM AND OBJECTIVE

Designing an online chess game by using an AI approach which manages all the moves that are played by players. Here game lovers can learn and play Chess game by different means. Professional players can take part in tournaments that is totally a commercial activity for site owner.

IV. LITERATURE SURVEY

Mark Ginsburg proposed that, there was a public code base for client-server based Internet chess playing. Prospective chess players could telnet into a server machine, logon with a self-declared and unique 'handle' or ID, and then challenge one another and begin play. The severe usability problems in the nascent Internet chess offerings were; the lack of a graphical interface, that is, with a text-only screen, a chessboard was represented as an ASCII 8x8 grid, and the second was an unwanted penalty of network delay for players connecting from relatively slower networks than their adversaries. There were rating so measure the chess prowess, which is an integer value that can go up or down depending on performance in a player's lifetime. There are chess ratings managed by national federations, such as the US Chess Federation (USCF) in the case of the USA.

André Pereira[10], Carlos Marino, Iolanda Leite, Rui Prada, Ana Paiva[10] designed a pervasive chess game. In this paper we describe a model inspired by the field of Pervasive Gaming, a field that profits by the mix of real, virtual and social game elements. Taking advantage of both computerized chess and traditional chess game elements, to maintain the playing experience would be interesting as close as possible to that of traditional chess, where opponents face each other and play on a physical chessboard. Successful controllers designed to employ user's body movements in the real world as

a game input mechanism. Games using this type of controllers increase the social interaction between users, their individual engagement and appeal to wider. Researchers such as, Allen Newell, Claude Shannon, Herb Simon, John McCarthy, Ken Thompson and Alan Turing had given very effective theory in computer science. Now that computers have reached grand level, and are beginning to look up for the World Championship, the AI community should take a break and start evaluating the significance of chess in the evolving objectives of AI, and contributions made to date, and clear the vision of what can be expected in the future. Sebastian Thrun presented Neuro-Chess, a program which learns to play chess from the final outcome of games. The evaluation functions which represented by artificial neural networks is learned from Neuro-Chess. It integrates inductive neural network learning, and a variant of explanation-based learning, temporal differencing. In 2014, Priya Hajari, Raakhee Iyer, Ashish Patil, gave an application of artificial intelligence. Initially a chess-board with sensors are used for the playing. This is then displayed in the screen. This chess playing consists of two parts- detection of the illegal moves to avoid the player from making wrong moves and giving you the best moves that can be achieved while playing. The min-max algorithm and the alpha-beta pruning is used for the best moves implementation.

Bratko [5] discussed the technique of chess players to "chunk" together and to reduce the complexity of AI when considering a position. However, in its early stages this technique requires that multiple assumptions and a complicated detection process. Over the years, chess has been proved to be a fertile for ideas and techniques that have spread to other various areas of AI. These include database enumeration techniques [Bratko,1978] chunking [Campbell, 1988], search techniques (min-max, alpha-beta) and the utility of information. Considering the lack of funding for chess, it is significant that chess has produced so many results. Berliner [3] recognized that two similar positions may be very different and sought to present a taxonomy of positions in chess that requiring a special knowledge. However, this type of research is essentially never complete. Much previous literature survey has been conducted in Chess artificial intelligence and creating a more intelligent Chess match. By referring the past implementations, scientists presented the Min-Max algorithm and game tree developed by it, thus applying an evaluation function to the leaves of the tree, that judges the value of certain moves from the particular given position. Another method is to cut off the search by setting a limit to its depth which found a particular technique called alpha-beta pruning to remove branches of a tree that will no influence the final decision.

V. PROPOSED WORK

A. Product Function

- There is Provision for Chess pieces movement polices.
- Registration of players and profile management for Players with their preferences.
- Chess Watch must be available for all users.
- Players rating evaluation algorithm.
- Tournament game activities management.
- Game stop, resume and saving options.
- Communication Facilities between players using forums/online chat.
- Help, tutorial and instructions for end-users to learn chess game and puzzle.

B. User Characteristics

- 1) *General End Users For Fun*: Unregistered users visiting the site just for fun. A general end user can play puzzles, tutorials, and chess with computer. They are restricted to participate in tournaments used for commercial purpose.
- 2) *Chess Tournament Player*: These are the registered users which can access all the facilities including tournament participations.
- 3) *Administrator/Managers*: They are service providers who manage the administrative tasks and perform maintenance work.

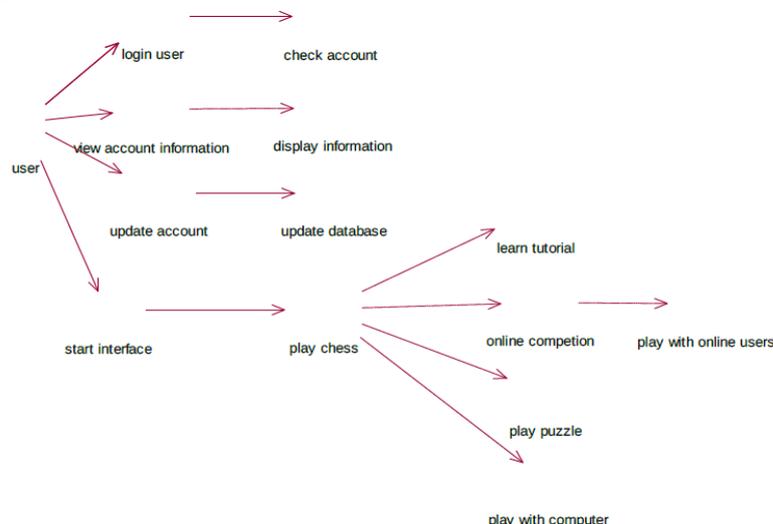


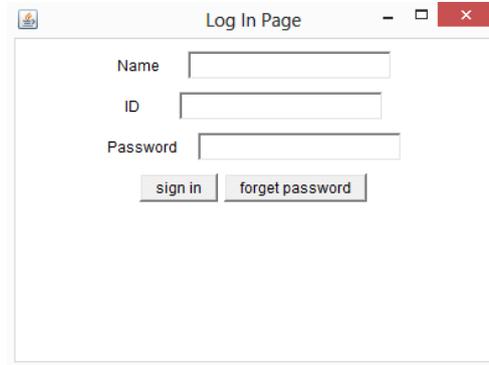
Fig.1 Use Case diagram for user interface

VI. IMPLEMENTATION

Modules are as follows-

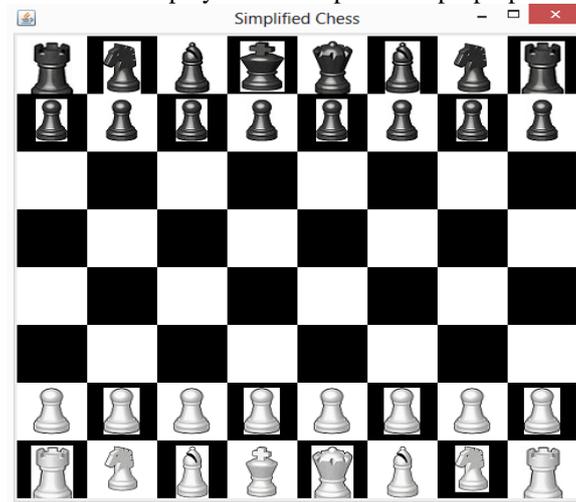
A. Log In

This application is one browser so to enter in this game you need to first register yourself by filling one simple form which contains basic information. Then you get password and aunique id. To log in to this application you have to use this id and password.



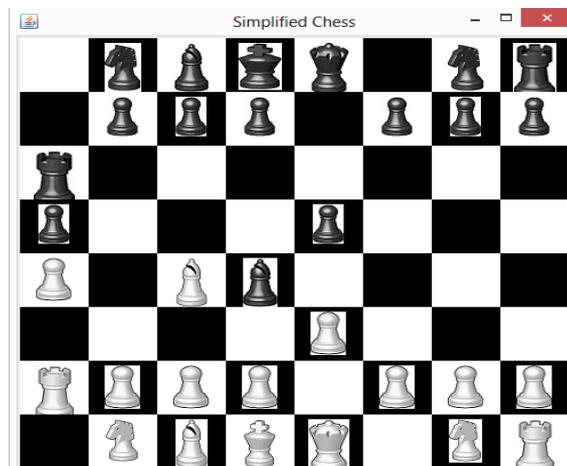
B. Chess Board Design Where Players Can Be Placed At Proper Position in Grid and Its Numbering

Here basic layout of chessboard is made. All the players will be placed in proper position.



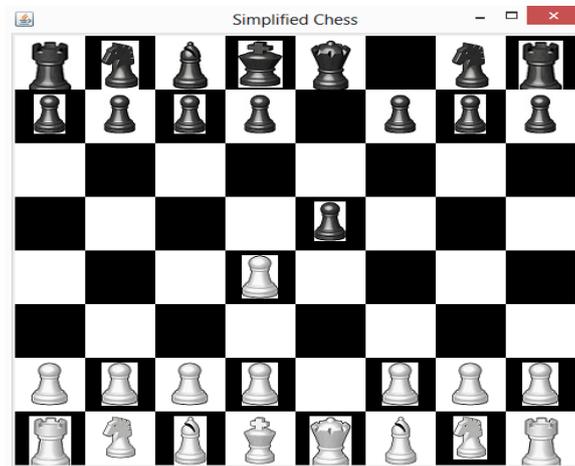
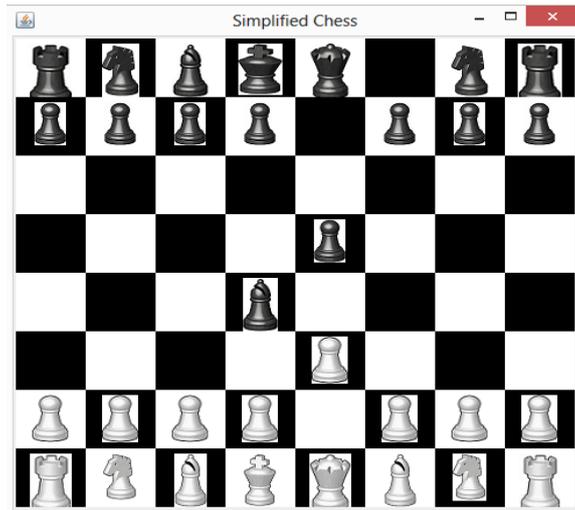
C. Chess Players That Can Move As Defined

Each chess player have their own specific rules of moves. Here each player will only move according to their predefined rule.



D. Chess Player Kill Moves

To win a particular game one player should kill opponent's player and all the killing logic will be explained here. In this module one player can be able to another player if that player is on his path.

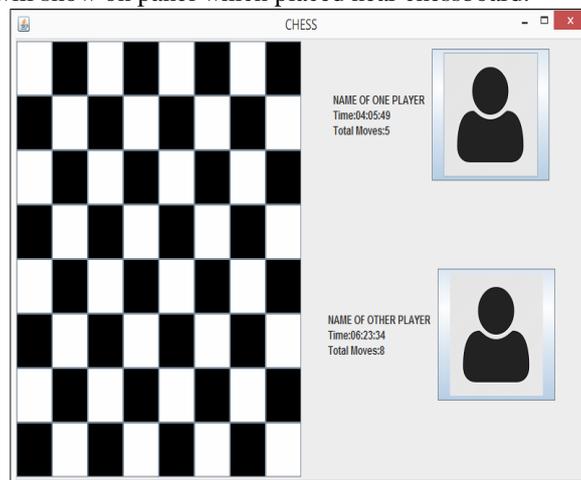


E. Chess Game For Two Players Turn By Turn (B&W),Where Each One Should Have To Wait For Its Turn

In this module, player 1 play his move then player 2 play his move in short to play next move you have to wait till next players moves. Then no matters how long time it take. In between game if any player leaves game then your game will be saved to database,so when you again login to online chess masters club then it will start from same point which you left.

F. Save These Moves in Database And Show In Side Panel (Each Game Must Be Saved In Database And Should Not Overwrite)

In this module, moves of player will show on panel which placed near chessboard.



G. Simple Chess Game AI Implementation In and Either Side and Both Side

When player play there move ,then computer will check whether that move is valid or not ,if that move is valid it will save that move in database but if that move is not valid then it will popup on massage for user that this is invalid move.

H. Design and Apply Final Logic

At last whole project will run on browser.

VII. CONCLUSION

The main contribution of this work was designing model for chess game which run on browser. By the realization of the above proposed system one can learn many aspects of online game. This will give the complete knowledge of designing online chess master club. It will help to organize worldwide championship or tournaments where game lover can play game according to their own comfort level that is totally a commercial activity for site owner, no need to travel just to attain match. It will also help you to learn chess, as when players play game, their moves will automatically save to the database so new registered user can see that moves and improve his game.

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