Project Proposal

CSC or CTC **492**

Spring/Fall 201_

TITLE: ____CHESS GAME_____

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Proposal:

Develop a program allowing two or more players to sign into a server and play chess with each other. A nice example of this sort of program, as an applet, can be viewed at Yahoo Games (Chess).

Working guidelines:

- Development language: C#.net, a language providing solutions to all aspects of project development.

- Graphical User Interface:
  - I. Menu Bar:
    - A. File
      1. Previous Games: Allows user to view completed matches.
      2. Model Games: User can view some games played by masters.
      3. Quit: Disconnect and exit program.
    - B. Connections
      1. Find Open Table: Find a game to play.
      2. Create Table: Open a table and wait for challenger.
      3. Watch Game: Watch someone else play.
         - a. Started: Options to join at different times of play.
         - b. Mid
         - c. End
      4. Find Buddy: Find a friend that's online.
      5. Disconnect: Disconnect and keep program running.
    - C. Actions
      1. Resign: Concede.
      2. Stand up: Stop playing and watch current table.
      3. Sit: Take a seat to play.
    - D. Help
      1. Rules: A link to chess rules.
      2. Find Online Chess
         - a. Yahoo: Links to popular websites.

b. Excite
c. Google

II. Basic chessboard in center of panel with red/white squares, simple graphics for pieces. Images stored on local disc for quick retrieval:

- Empty red square
- Empty white square
- Red square w/ centered pawn, knight etc.
- White square w/ centered pawn, knight etc.
- Red and white square move from (border color light blue)
- Red and white square move to (border color dark blue)

III. Move history list on vertical right: Stores moves made in (this) game.

- Will be stored in XML file between <hlist></hlist> tags. Moves made will be delimited by ';' parsed by program and added to list seen by user.
- After game is over, list will be added in data base table 'games'.

IV. Possible chat window at horizontal bottom: Players might be able to talk w/each other. Lines entered posted to XML file and appended to chat text area in application.

V. Basic Options on vertical left: For choices that need to be made quickly, or choices that would become too repetitive to continually use menu bar. Buttons might include resign, play, stand up, kick (if player owns table), timer, exit, find new game.

VI. Choose opponent page (a child form of main window): Allow user to join a game or reserve a table. Current games being played will be stored in data base table curGames on server.

VII. Sign-in page (also a child form): Allow user to connect to server. Stored in curPlayers data base table.

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- <u>Programming pertaining to chess game</u>:

I. Legal chess moves only: Legal moves checked by the application before being submitted. The current board position (images displayed and x,y coords of images) as seen by both players (inverted for own color on bottom) stored in XML file.

II. Detection of check/checkmate/stalemate scenarios: Handled by app. and possibly stored in XML file (might not need this). End of game results stored in each players 'player' data base table.

III. GUI programming

A. Move list and board position constantly updated with each move.
B. Images displayed and from/to positions of images (squares/pieces) determined by XML file and constantly updated with each move.

- Back-end programming: Research will be extensive and based on current proposed solution:
    - SQL server database will store player information, current games in play, previous games by player (if db memory permits otherwise option of e-mailing to player if requested).
    - XML file will be intermediary between (application and players), and (players and player info on database). The advantage of the XML DTD will be the possibility of creating other games that rely on images moving from one point to another based on mouse clicks.

  Note: More possibilities expected to arise during development.

Faculty advisor	*Signature*	*Date*

Committee member

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