Board Game Checkers

Team Quick Fix

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Goal to Achieve: A high quality graphical user interface Checker Game.

1) Two humans can play against each other.

2) Computer will decide the valid move.

3) Computer detect and declare the winner.

Specifications (version 1):

The final product should include as a minimal the following:

1) Two human players will play with **12 coloured** tokens (One set (Black) and One set (White)).

2) Game will be displayed on the computer screen.

3) It will be possible to save any intermediate state of the game and resume the game from this saved state.

4) Black Start and then alternate moves.

5) **Correct** moves are showed by **green** colour.

6) When captured it removes the piece, if one or more available then it's choice upon the player to which token, he wants to remove.

7) When a piece reaches the furthest, it is **crowned as king** (4 Diagonal Move).

8) A player wins the game when the opponent cannot make a move.

9) Who is **turn** pop-up.

10) Final version of **game networked**, meaning that two people can play it online.

Overview

Game checkers provides certain facilities (functionalities) to the user, to solve the user requirements (1 player, 2 players).

Product Perspective

In the project of checkers, the product perspective is to provide complete interface where user can play single player and multiplayer game in web-based Environment. GUI will be provided to facilitate this purpose.

Product Functions

1. Single-player and multi-player option: The main function of this Checkers game is to provide an interface where user will be able to choose their desired mode and play according to their requirements.

2. User Characteristics: Special features will be provided to the user to fulfil the requirements of the user. There are three different characteristics that will be completed at the end of this project.

3. Database: User game data will be stored both on their local database as well as Remote hosted database.

4. The web application will be hosted so that users across the globe can easily access it and use it.

Goals for using system

The goal for using this system is just to get entertained by this game in the online environment and sharpen their gaming and logical skills.

Potentials patterns of use

Regarding game of checkers, some users just play a game just for entertainment while other users might play a game occasionally. This game will facilitate all types of users whether they play just for entertainment or play on regular basis.

Software Requirements:

Git - Version control with this project.

Programming language: Python

IDE**: Pycharm**

GUI**: Tkinter**

Database**: MySQL**

Deployment**: Heroku**

Software Testing: **White Box (developers), TestBird**.

To meet the specifications as stated above in a timely manner, I have developed three deliverables.

Day 1-3

1) Produce an 8x8 checkerboard and dark **colored sqaures**.

2) Provide **12 light and 12 dark checkers**. The checker should be centred on the dark squared of the checkboard.

Day 3-6

1) Implement anti-aliasing to smooth the edges of the checkers and/or the squares.

2) Check for rules followed, check for popups.

Day 4-9

1) Work on GUI

2) Add network playing to the checker game. This requires sockets.

3) Bug testing

4) Software testing.

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Day 10

1) **Testing and hosting**.

Possible Extensions:

1) Implement multiple variations of 'Checkers' as defined on the Wikipedia page.

Allow players to select variation at the start of play.

2) Network Checkers: Two players can play over two different networks.

3) Colour change for checker available.

4) Pop-Out name, for whose turn.

5) Multiple Game Option.

6) Auto player option will also be given where computer will play on one side.