Checkers Game Coursework Report

1. Introduction

Application:

The aplication is a Checkers game played between two players, where each player controls pieces of a specific color and aims to eliminate the opponent's pieces or block their movement.

How to run the program?

To run the program, execute Python script. Ensure Pygame is installed in your Python environment. The game window will open, allowing players to interact with the graphical user interface.

How to use the program?

Players can select pieces by clicking on them. Valid moves will be highlighted on the board. Click on highlighted squares to move pieces. The game alternates between player turns, and players can save the game state by pressing the 's' key.

2. Body/Analysis

Functional Requirements Implementation:

The program effectively implements the functional requirements of a Checkers game. It includes features such as piece movement, capturing, king promotion, and turn-based gameplay. The graphical interface provides a user-friendly experience, allowing players to interact with the game board seamlessly.

3. Results and Summary

Results:

The Checkers game program successfully implements core functionalities, providing an engaging gaming experience.

Challenges faced during implementation include managing piece movements, validating moves, and implementing the AI opponent's logic.

Conclusions:

The coursework has achieved the development of a playable Checkers game with basic AI functionality. Players can enjoy challenging AI opponents or compete against each other on the same machine. The game demonstrates fundamental concepts of game development and artificial intelligence.

Future Prospects:

Future prospects include enhancing the AI strategy to provide a more challenging opponent.

Improving the graphical interface with animations and sound effects to enhance user engagement.

Adding multiplayer capabilities to allow players to compete online.