Terminal Chess Game Using Python

Ahmai Chaney-Smith

Project overview

I am proposing to develop a chess game that can be played on terminal applications. The game will allow humans to play against each other on the same device and allow humans to play against an AI opponent.

The game will include features such as a timed mode, displaying legal moves for each piece upon click, allowing players to undo moves, using chess notation to move pieces, check-checkmate-stalemate-capture, and game history.

The game will be developed using the Python programming language and will be implemented using a combination of GUI and terminal-based interfaces. The GUI interface will allow players to interact with the game using mouse clicks and keyboard input, while the terminal interface will be used for the backend logic.

Specific objectives

The project will involve the following tasks:

1. Designing the GUI and terminal interfaces for the game
2. Implementing the rules and movement of each type of chess piece
3. Implementing the concept of check, checkmate, stalemate, and captures
4. Implementing the undo feature
5. Implementing an AI opponent
6. Implementing a chess notation ability to move pieces
7. Displaying game history

Initial draft of timeline and time commitment

Weekly time commitment

I plan to spend 12 hours per week on the project

Monthly timeline from February 12th to May 7th *(12 weeks)*

1) February
    a) research into the Python algorithms and data structures
    b) research into building the AI
2) March
    a) research into the Python algorithms and data structures
    b) designing GUI
    c) implementing rules and movement
    d) implementing check, checkmate, stalemate, and capturing
3) April
    a) research into the Python algorithms and data structures
    b) implement game timer
    c) implement game history
4) May

a) research into the Python algorithms and data structures
b) final tests and/or additional features made

Research plan

Presently, my research plan includes using Codecademy for the basis of my Python algorithms and data structures knowledge. As for the AI component, I am unsure what resources I will rely on there.

Project logs

Current Total Hours: 0.5

Color Key:

- Red = Supervisor discussions, emails
- Yellow = Design
- Green = Coding
- Blue = Testing & Debugging
- Purple = Research, training, learning

Date	Duration	Description of completed work
2/10/2023	0.5 hour	Emailing supervisor and editing project description

Delivery

Documentation & source code

No source code available yet.