Team members:

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Roles and Tasks:

Arbi Maloku: Designing and Implementing a graphical user interface that displays the chess board and pieces and allows users to interact with them by clicking or dragging.

Albjor Dollani: Developing and integrating a chess engine that implements the rules and logic of chess, such as how the pieces move, capture, check, and checkmate. The chess engine also generates all the legal moves for a given position, and evaluates the strength of each side.

Gledian Alimema: Creating and applying a chess AI that uses algorithms to find the best move for the computer player, based on the current position and a search depth. The chess AI can also adjust its difficulty level according to the userâs preference or skill.

Orgest Shira: Enabling a multiplayer mode that allows users to play chess online with other players, either randomly or by invitation. The multiplayer mode requires an Internet server to connect the users and synchronize the game state.

Hysen Allushi: Testing and debugging the chess game application to ensure that it works correctly and smoothly, and that there are no errors or bugs in the code or the user interface.

Problem Identification:

Who are the target users of this chess game application, and what are their needs, preferences, and expectations?

What are the resources and constraints that affect the chess game application, such as time, budget, skills, equipment?

What are the potential risks and challenges of the chess game application, and how do you mitigate and overcome them?

Solution proposal:

The target users of chess game are people who enjoy playing, learning, and improving their chess skills. They can be of any age, gender, or background, but they share a common interest in chess.

We have plenty of time and budget and we do not doubt our skills either.

Complexity and uncertainty: Chess is a game of high complexity and uncertainty, as there are many possible moves and outcomes for each position. This makes it challenging to design and implement a chess engine and AI that can handle all the scenarios and perform well. To mitigate this risk, we can use existing chess engines and AI libraries that have been tested and optimized by experts.

Project scope:

Project Name Game name: MESSI Shahut

Project Description: MESSI Shahut is a chess game application that allows users to play chess on a computer or a mobile device. The application will provide a user-friendly interface, a powerful chess engine, a smart chess AI, and a multiplayer mode. The application will be developed using Python, Pygame, and Stockfish, and will run on Windows and Linux platforms. The application will aim to deliver a high-quality and engaging chess experience, and will be tested and evaluated using various methods and metrics.

Project Goals:

The main goals of the project are to:

Create a chess game application that meets the user needs and expectations.

Implement the rules and logic of chess, and generate all the legal moves for a given position.

Provide a chess AI that can find the best move for the computer player, and adjust its difficulty level.

Enable a multiplayer mode that allows users to play online with other players.

Design a graphical user interface that displays the chess board and pieces, and allows users to interact with them.

Ensure the security and reliability of the application, and prevent cheating, hacking, or malicious attacks.

Deliver the project on time, on budget, and on quality.

Project Deliverables:

The main deliverables of the project are:

A chess game application that runs on Windows and Linux platforms. A user manual that explains how to use the application. A technical documentation that describes the design and implementation of the application. A test report that shows the results and outcomes of the testing and evaluation.

Project Features and Functions:

The main features and functions of the project are:

A chess engine that implements the rules and logic of chess, such as how the pieces move, capture, check, and checkmate.

A chess AI that uses algorithms to find the best move for the computer player, based on the current position and a search depth.

A multiplayer mode that enables users to play chess online with other players, either randomly or by invitation.

A graphical user interface that displays the chess board and pieces, and allows users to interact with them by clicking or dragging.

A menu that allows users to choose the game mode, the difficulty level, the color of the pieces, and the time control.

A feedback system that provides sound effects, animations, and messages to the users.

A rating system that tracks the performance and progress of the users.

Project Tasks:

The main tasks of the project are:

Designing and implementing a graphical user interface that displays the chess board and pieces, and allows users to interact with them.

Developing and integrating a chess engine that implements the rules and logic of chess, such as how the pieces move, capture, check, and checkmate.

Creating and applying a chess AI that uses algorithms to find the best move for the computer player, based on the current position and a search depth.

Enabling a multiplayer mode that allows users to play chess online with other players, either randomly or by invitation.

Testing and debugging the chess game application to ensure that it works correctly and smoothly, and that there are no errors or bugs in the code or the user interface.

Evaluating the chess game application to measure and assess its quality and performance, and its user satisfaction and feedback.

Subbmission Deadline:

Phase1 04.03.2024

Team members and their tasks are at the top.