Indian Institute of Information Technology, Vadodara International Campus Diu

Practical Work Book

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Subject: CS261

Session: 2022-2023

CERTIFICATE

This is certify that Mr. Ayush Gangwar of BTech Enrollment Number 202211006 Branch Computer Science and Engineering (CSE) has been found satisfactory in the continuous internal evaluation of laboratory, practical and term work in the subject CS261 for the academic year 2023-24.

Date:

Purpose of Terminal Chess:

- Accessible Chess Gameplay

- Chess Learning Tool

- Quick and Lightweight

- Flexible and Customizable

Scope of the Software Project:

1. Core Chess Gameplay

2. Command-Line Interface

3. Game Management

4. Help and Instructions

5. Configurability

6. No Graphics

7. Error Handling

8. Platform Compatibility

9. Testing and Debugging

10. Documentation

11. Scalability

Functional Requirements

Enable users to start new chess games. Accept and validate chess moves in standard algebraic notation. Enforce turn-based gameplay between two players. Display the current board state after each move. Detect and declare checkmate or stalemate conditions. Allow players to resign and offer a win to the opponent. Provide options to save and load game states. Maintain a record of all moves made during the game. Allow users to review the move history. Offer a help command for instructions on program usage. Allow users to configure game settings, such as starting positions.

Non-Functional Requirements

Ensure efficient program performance with responsive input. Prioritize a user-friendly and intuitive command-line interface. Ensure compatibility with various terminal environments and Postimplant robust error handling and clear error messages. Maintain data security and avoid introducing vulnerabilities. Consider scalability for potential future enhancements. Provide comprehensive documentation, including installation instructions. Conduct rigorous testing, including unit and integration testing. Develop maintainable code to support future updates and bug fixes.

Use Cases

1. Starting a New Game

2. Making a Move

3. Resigning from the Game

4. Saving and Loading a Game

5. Reviewing Move History