Time Management System - User Requirements

1. Command Line Interface (CUI)

- As a user, I expect the system to have a Command Line Interface (CLI) that allows me to interact with the application using command-line tools.

2. Recording Time

- As a user (Jack), I want to record my time usage using the command format: `DATE FROM TO TASK TAG`.
- The system should support flexible date formats, such as "today" or "2022/09/23."
- AM or PM should be accepted for the FROM and TO times.

3. Querying Time

- As a user (Jack), I want to query my time usage from the database using the command format: `query DATE`, `query TASK`, or `query TAG`.
- For date queries, I expect to use formats like "today."
- Task queries should match activities containing the specified keyword.
- Tag queries should retrieve activities with the specified tag.

4. Flexibility in Query Format

- As a user, I expect the system to allow me to use flexible formats for queries, providing options like querying by date, task, or tag.

5. Programming Language and Database

- As a user, I expect the system to be implemented using Python as the programming language.
- SQLite should be used as the database, taking advantage of its integration with Python.

6. Error Handling

- As a user, I expect the system to handle errors gracefully and provide informative messages if there are issues with command input or database operations.

7. Database Storage

- As a user, I expect recorded time entries to be stored in an SQLite database.

8. DateTime Flexibility

- As a user (Jack), I expect the system to handle date and time flexibility, allowing me to enter information conveniently.

9. Data Retrieval

- As a user (Jack), I expect the system to retrieve and display relevant information from the database based on my queries.

10. User-Friendly Output

- As a user, I expect the system to present query results in a user-friendly and readable format.

11. Tagging System

- As a user, I want tags to be supported for categorizing activities.

12. Integration with Standard Python Libraries

- As a user, I expect the system to make use of standard Python libraries for simplicity and ease of use.