NATION UNIVERSITY OF MODERN LANGUAGES

DEPARTMENT OF SOFTWARE ENGINEERING

REQUIREMENT SPECIFICATION DOCUMENT

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Task Management Application

1. **Introduction:**
   The Task Management Application is a GUI-based tool designed to help users manage their tasks effectively. It designed to provide users with a comprehensive tool for organizing and tracking their tasks effectively. It offers various functionalities to create, manage, and monitor tasks through different stages of completion. It provides a user-friendly interface visual representation of tasks categorized into three sections: To Do, In Progress, and Completed. Users can add tasks, move them to In Progress, mark tasks as completed, and delete tasks as needed. This document outlines the detailed description of each functionality along with its purpose, and specifies both functional and non-functional requirements.

2. Functionalities OR Functional Requirements and Purpose:

2.1 Adding Tasks:

- **Purpose:** Allows users to input a task description and add it to the To Do list.
- **Description:** Upon clicking the "Add Task" button, a dialog box prompts the user to enter a task description. Once entered, the task is added to the To Do list, and the GUI updates to reflect the change.

2.2 Moving Tasks to In Progress:

- **Purpose:** Enables users to move tasks from the To Do list to the In Progress list when they begin working on them.
- **Description:** After selecting a task from the To Do list, users click the "Move to In Progress" button. The selected task is then transferred to the In Progress list, and the GUI updates accordingly.

2.3 Moving Tasks to Completed:

- **Purpose:** Allows users to mark tasks as completed and move them to the Completed list.
- **Description:** Users can select a task from the "In Progress" list and click the "Move to Completed" button. The selected task is then moved to the "Completed" list, and its completion time and duration are recorded.

2.4 Deleting Tasks:

- **Purpose:** Provides users with the ability to remove tasks from any list.
- **Description:** Each task displayed in the GUI includes a "Delete" button. When clicked, the associated task is removed from its respective list, and the GUI updates to reflect the change.

2.5 Visual Representation:

- **Purpose:** Presents tasks in a visually appealing and organized manner for easy management.
- **Description:** The GUI divides tasks into three sections: To Do, In Progress, and Completed, each displayed with a distinct label and color scheme. Tasks are listed along with their respective buttons for deletion and done button for viewing task completion time and duration, providing a clear and intuitive interface for task management.

2.6 View Task Completion Time and Duration

- **Purpose:** Allows users to view the completion time and duration of completed tasks.
- **Description:** When a task is marked as completed, users can click the "Done" button next to it. A dialog box appears displaying the completion time and duration of the task.

3. Non-functional Requirements

3.1 Usability:

- The application provides a simple and intuitive interface for task management.
- Clear labeling, distinct color schemes, and interactive buttons enhance usability.
- Users can quickly add, update, and remove tasks without encountering complexity.

3.2 Scalability:

- The application is designed to handle tasks efficiently, allowing users to manage a large number of tasks seamlessly.
- Task lists can accommodate numerous tasks without sacrificing performance or usability.

3.3 Reliability:

- The application ensures reliable task management by accurately reflecting task states and providing robust functionality for task manipulation.
- Users can trust that their tasks are organized and managed effectively within the application.

3.4 Performance:

- The application should respond promptly to user actions, even with a large number of tasks.

3.5 User Interface:

- Ease of Use: The GUI should be intuitive and easy for users to understand and navigate.
- Aesthetics: The interface should be visually appealing and utilize appropriate fonts, colors, and layout.

3.6 Consistency:

- UI Consistency: The design elements, terminology, and interactions should remain consistent across different parts of the application to reduce cognitive load and enhance user familiarity.
- Behavioral Consistency: Similar actions or operations should yield consistent outcomes to build user trust and confidence in the application.

3.7 Error Handling:

Descriptive Error Messages: When errors occur, the application should display clear and concise error messages that explain the issue and suggest corrective actions to help users resolve problems effectively.

Conclusion: The Task Management Application offers a user-friendly solution for organizing and managing tasks efficiently. With its intuitive interface and comprehensive functionality, users can stay organized, track progress, and accomplish tasks effectively.