



COLLEGE CODE: 9528

**COLLEGE NAME: SCAD COLLEGE OF ENGINEERING
AND TECHNOLOGY**

**DEPARTMENT : COMPUTER SCIENCE AND
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Phase 1

TECHNOLOGY PROJECT NAME :

TO DO LIST APPLICATION

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Phase 1 – Problem Understanding & Requirements (Manual Notes – Expanded)

Problem Statement:

In today's fast-paced lifestyle, individuals often struggle to efficiently manage their daily tasks and responsibilities. Traditional methods like paper notes or basic reminders are either prone to being misplaced, lack accessibility, or fail to provide necessary features such as prioritization, categorization, and timely notifications. This leads to missed deadlines, reduced productivity, and increased stress.

A To-Do List Application is required to provide a simple, intuitive, and accessible platform where users can create, organize, and track tasks effectively. The solution should allow features like task addition, editing, deletion, prioritization, categorization, and reminders,

ensuring that users can manage their time and activities more efficiently.

2. Users & Stakeholders

Primary Users (End Users):

- Students – to manage study schedules, assignments, and exams.
- Professionals – to track work tasks, meetings, and deadlines.
- General individuals – to organize personal chores, shopping lists, and daily activities.

Secondary Users:

- Teams or groups – when the app supports shared task lists and collaboration.

Stakeholders

Project Owner / Client – who funds or commissions the app.

Development Team – software developers, designers, and testers building the application.

Product Manager – who defines features and ensures user needs are met.

Marketing Team – responsible for promoting the app to reach its target audience.

Investors – if the app is commercial, they expect a return on investment.

Platform Owners – app stores (Google Play, App Store) that distribute the app.

Support & Maintenance Team – who ensure the app runs smoothly post-deployment.

3. User Stories

1. Task Management

As a user, I want to add tasks with titles and descriptions so that I can remember what needs to be done.

As a user, I want to edit or delete tasks so that I can keep my list up to date.

As a user, I want to mark tasks as complete so that I can track my progress.

2. Organization & Prioritization

As a user, I want to categorize tasks (e.g., work, personal, study) so that I can organize them better.

As a user, I want to set priority levels (high, medium, low) so that I can focus on important tasks first.

As a user, I want to sort tasks by due date or priority so that I can plan effectively.

3. Reminders & Notifications

As a user, I want to set deadlines and reminders so that I don't miss important tasks.

As a user, I want to receive notifications for upcoming tasks so that I stay on track.

4. Accessibility & Usability

As a user, I want to access my tasks across multiple devices so that I can manage them anywhere.

As a user, I want a simple and intuitive interface so that I can use the app easily without training.

5. Collaboration (if applicable)

As a user, I want to share my task list with others so that we can collaborate on group projects.

As a user, I want to assign tasks to team members so that responsibilities are clear.

4. MVP Features

1. Task Creation & Management

- Add, edit, and delete tasks.
- Mark tasks as complete/incomplete.

2. Task Organization

- Categorize tasks (work, personal, etc.).
- Set priority levels (e.g., high, medium, low).

3. Reminders & Deadlines

- Add due dates to tasks.
- Basic notifications/reminders for upcoming tasks.

4. User-Friendly Interface

- Simple, clean, and intuitive UI.

- Easy navigation for quick task updates.

5. Basic Data Persistence

- Save tasks locally (offline support) or in the cloud (if login is included).

Optional (Future Enhancements, beyond MVP)

Multi-device synchronization.

Collaboration and task sharing.

Recurring tasks.

Advanced notifications (snooze, recurring reminders).

Analytics/dashboard (e.g., completed tasks, productivity tracking).

Voice input or AI suggestions.

5. Wireframes / API Endpoint List

The To-Do List Application is designed with a clean and user-friendly interface to make task management simple and efficient. The Home screen acts as the central hub, where users can view their list of tasks at a glance. Each task is displayed with its title, due date, priority level, and a checkbox to mark completion. A prominent “Add Task” button allows users to quickly create new tasks, while filters and sorting options help them organize their lists by date, category, or priority. When adding or editing a task, users are directed to the Task Form screen, where they can enter a task title, an optional description, select a due date, assign a priority level (high, medium, or low), and categorize it under a predefined group such as work, study, or personal. For detailed task tracking, an optional Task Detail screen can be included, displaying the complete information about a specific task along with edit and delete options. Additionally, future enhancements may introduce a Settings or Profile screen

that allows users to manage categories, customize notification preferences, and enable synchronization across devices.

To support these features, the application relies on a RESTful API. The authentication endpoints (`/auth/register`, `/auth/login`) ensure secure user access, enabling personalized task lists. The core functionality is handled by task endpoints: `GET /tasks` retrieves all tasks, `POST /tasks` creates a new task, `GET /tasks/{id}` fetches details of a specific task, while `PUT /tasks/{id}` and `DELETE /tasks/{id}` allow users to update or remove tasks. For organization, the API includes category endpoints (`/categories`) that let users create, edit, or delete task categories. Optional reminder endpoints (`/tasks/{id}/reminder`) enhance productivity by allowing users to set or remove task reminders. Together, these wireframes and API endpoints create a minimal yet powerful system, ensuring that users can manage, organize, and track their daily activities effectively.

6. Acceptance Criteria

Task Management

Users must be able to create a new task with at least a title.

Users must be able to edit an existing task.

Users must be able to delete a task.

Users must be able to mark tasks as complete/incomplete.

When a task is marked complete, it should be visually distinguished (e.g., strikethrough or checkmark).

2. Task Organization

Users must be able to assign a category to a task (e.g., work, personal).

Users must be able to assign a priority level (high, medium, low).

Users must be able to sort or filter tasks by due date, priority, or category.

3. Reminders & Deadlines

Users must be able to set a due date for a task.

The system must notify the user when a task is due (basic notification).

If no due date is set, the task should remain as “no deadline.”

4. Data Persistence

Tasks must be stored and remain available even after the app is closed and reopened.

Changes (create, edit, delete) must be reflected immediately in the task list.

5. User Experience (UX)

The interface must be simple, clean, and responsive.

Users must be able to navigate between task list and task form easily.

The app must load the task list within 2 seconds of opening.