

Project Report – To-Do List

1. Project Title

To-Do List Application

2. Abstract

The To-Do List is an interactive React-based application that helps users manage daily tasks. Users can add, edit, delete, and mark tasks as complete. The app features animated backgrounds, task progress tracking, and celebration effects when all tasks are completed, enhancing user engagement.

3. Technologies Used

- Frontend: React.js, HTML5, CSS3
- Libraries: Canvas-Confetti, Font Awesome
- Data Storage: LocalStorage
- Styling: Responsive design using CSS and media queries

4. System Design / Architecture

- Component Structure:
 - App.jsx – Main app container
 - To-Do-List.jsx – Core component handling tasks
 - To-Do-List-Function.js – Logic for task management
 - backgroundChanger.js – Manages dynamic backgrounds

- Features:

- Task CRUD (Create, Read, Update, Delete)
- Priority, category, and optional due date for tasks
- Progress bar displaying task completion percentage
- Confetti animation on task completion
- Persistent storage with LocalStorage

5. Modules / Features

1. Task Management – Add, edit, delete, mark as complete.
2. Task Progress Tracking – Visual progress bar and numerical stats.
3. Dynamic Backgrounds – Background image changes every 10 seconds.
4. Celebration Animation – Confetti triggers when all tasks are completed.
5. Responsive Design – Works across multiple screen sizes.

6. Implementation Details

- State is managed using React Hooks (useState, useEffect).
- Task CRUD operations are handled through pure functions (addTask, removeTask, toggleTaskCompletion).
- Progress is calculated dynamically and updated in real-time.
- LocalStorage persists user tasks between sessions.
- Confetti animation triggers conditionally when all tasks are completed.
- Responsive media queries ensure mobile, tablet, and desktop compatibility.

7. Screenshots (Optional)

(Placeholder images can be added for the homepage, task list, and progress screen.)

8. Conclusion / Future Scope

The To-Do List app is a fully functional productivity tool for task management.

Future enhancements could include:

- Cloud synchronization
- User authentication
- Notifications and reminders
- Dark/light mode toggle