



**NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES  
(KARACHI CAMPUS)**

## **Project Proposal**

### **Project Title**

TaskCraft Pro

### **Instructor**

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### **Section**

BSCS-5E

## 1.1 Problem Statement

Many individuals struggle with organizing and managing their tasks effectively, leading to a lack of productivity and potential missed deadlines. There is a need for a user-friendly and efficient solution that allows users to easily create, track, and prioritize their tasks in a centralized platform.

## 1.2 Solution Statement

The solution is to create a todo list application using the PERN stack (PostgreSQL, Express, React, and Node.js) that provides a user-friendly interface for adding, editing, and deleting tasks.

## 1.3 Description of proposed Project

The proposed project is to develop a web-based todo list application that allows users to create and manage their tasks. The application will have a clean and intuitive user interface, making it easy for users to add, edit, and delete tasks. It will also provide features such as task prioritization, due dates, and task categorization.

## 1.4 Features/Functions of the project.

1. **Creating:** The project allows users to create new to-do items, providing a form or interface where users can input the necessary details for the task.
2. **Getting:** Users can retrieve or view their existing to-do items, either through a list or a specific view that displays the tasks.
3. **Updating:** The project enables users to update or modify their to-do items, allowing them to change the task's title, description, due date, or any other relevant information.

4. **Deleting:** Users can delete unwanted or completed to-do items from their list, removing them permanently from the system.
5. **Database Operations:** The project demonstrates how to perform essential database operations such as inserting new to-do items, retrieving existing items, updating item details, and deleting items from the database.

## 1.5 Tools and Techniques to be used

- **PostgreSQL:** for the database management system
- **Express:** for building the backend server
- **React:** for building the frontend user interface
- **Node.js:** for server-side JavaScript runtime
- **HTML/CSS:** for structuring and styling the application
- **JavaScript:** for implementing the application's logic