Assignment 05

Aim :

Develop a responsive web design using Express framework to perform CRUD operations and deploy with Node JS. use the Mongo DB.

Objective :

i) Develop a full stack web application
ii) Demonstrate Backend development proficiency

theory :

1) Role of Express.js as a web framework for Node.js

ans.

i) Express.js is a lightweight and flexible web framework built on top of Node.js.
ii) it simplifies the process of handling HTTP requests, responses and routing.
iii) it provides middleware support, easy integration with databases and tools for building REST APIs.
iv) express reduces boilerplate code and helps in faster development of scalable web applications.

② CRUD Operations in Web Applicatio ④
ans.

the CRUD stands for Create, Read
Update, Delete, which are the
four basic operations of
persistent storage in a web
application
i) Create - Add new data to the
database
ii) Read - retrieve and display dat
iii) update - Modify existing date
iv) Delete - Remove unwanted data
these operations allow the
application to interact dynamical
with users and manage data
effectively.

③ Why MongoDB is suitable
ans.

i) MongoDB is a NoSQL, document-
oriented database that stores dat
in flexible JSON like format.
ii) it is schema-less, making it
easier to handle unstructured
and evolving data.
iii) MongoDB scales well with large
datasets, integrates smoothly
with Node.js and Express throu
Mongoose, and provides fast
performance for CRUD operations
which makes it ideal for full
stack applications.

④ steps
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(4) steps in Deploying a Node.js and Express Application

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i) preparing the project by setting environment variables and production settings

ii) using a hosting service like Heroku, AWS or Render

iii) pushing code to a Git repository

iv) push and install dependencies on the server (npm install)

v) setting up process managers like PM2 to keep the app running

vi) configuring a reverse proxy (eg. Nginx) for routing

vii) Testing the deployed application to ensure functionality.

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