



Sukkur IBA University

Final Examination Practical Exam

Course: Enterprise Application Development
Date: 3rd June 2025
Instructor: Khalid Hussain

Class: BS-VI
Time: 1 Hour
Marks: 15 Marks

Instructions:

- No Mobile Phones are allowed.
- Save your files after any changes.
- Submit a single React component file (not an entire project) and provide the GitHub repository link. The link must be pasted directly in the LMS text submission box, not inside a text file.
- Once done, submit it in LMS (Section: Part-B).

Part-B (Backend)

(No Internet, Copilot/ChatGPT, or any AI model/extension is allowed)

Create a Books API in Node.js using Express.js and connect it to MongoDB Atlas. Implement full CRUD operations using Mongoose.

What You Need to Do

1. **Project Setup**
 - Create a new Node.js project using npm init
 - Install necessary packages: express, mongoose, body-parser
 - Create a single entry point file (e.g., index.js)
2. **Connect to MongoDB Atlas**
 - Set up a **free MongoDB Atlas cluster**
 - Create a database user and password
 - Whitelist your IP (or use 0.0.0.0/0 for development)
 - Use Mongoose to connect to the MongoDB URI
3. **Define a Mongoose Schema**
 - Create a schema for Book with the following fields:
 - title (string)
 - author (string)
4. **Implement the Following API Endpoints**

Method	Endpoint	Description
GET	/books	Get all books
GET	/books/:id	Get book by ID
POST	/books	Create a new book
DELETE	/books/:id	Delete book by ID



Git Commit Plan (Minimum 4 Commits)

Commit #	Commit Message
1	Initial commit: setup Express app and MongoDB connection
2	Feature: add book schema and GET routes
3	Feature: add POST and DELETE routes
4	Feature: add PUT route for updating books