Bytexl’s Guided Project - Students’ User Guide

## Build job-relevant skill sets by developing solutions to practical use cases

Bytexl’s educators have created specialized guided projects to help you practice essential technology languages and software, such as java ,javascript ,rest api, and more. In about 2 hours, you can build a project that enhances your job-ready skills as your educator guides you through a hands-on experience on Bytexl’s app.

## Instructions for Students

### Project-Based Learning Course Overview

#### About the Project

This project provides hands-on experience in creating a real-world application using the SpringBoot and React. You will learn to create Rest Api, build user interfaces, and integrate essential functionalities that are relevant in almost every fullstack application.

#### Prerequisites

- Basic knowledge of \*\*JavaScript, java, and React\*\*.  
- Familiarity with CRUD operations and frontend-backend integration is helpful.

### What Will You Learn?

- Basic of Rest Api using SpringBoot.  
- Learn basic of React .

### Skills You Will Practice

- Backend setup and API creation.  
- User interface development.

### How to Execute Your Project?

1. \*\*Project Access\*\*: Access all necessary tools and project materials directly on Bytexl’s app.  
2. \*\*Device Requirements\*\*: Complete this project on a desktop or laptop, as it cannot be developed on mobile phones.  
3. \*\*Setup Instructions\*\*: Detailed setup instructions are provided in the project resources to ensure a smooth workflow.

## Course Objectives and Structure

### Course Objectives

In this project, we will focus on the following objectives:  
1. Set up a backend with MySql and SpringBoot.  
2. Learn to implement CRUD operations with the help of Rest Api.  
4. Create basic frontend app with React.js

### Course Structure

The course is divided into three parts:  
  
1. \*\*Course Overview\*\*: Introductory reading material.  
2. \*\*Project Structure\*\*:  
- \*\*Task 1\*\*: Backend setup with SpringBoot and mySql integration.  
- \*\*Task 2\*\*: CRUD API development and testing.  
- \*\*Task 3\*\*: Frontend components with React.js.  
- \*\*Task 4\*\*: User interface testing and final deployment.  
3. \*\*Meet Your Educator\*\*:  
- \*\*Educator\*\*: Zameer Hussain, an experienced instructor with a background in software engineering and web development.

## Expected Outcomes

Upon completing this project, you should be able to:  
- Develop and deploy a functional Restfull application.  
- Integrate and manage data in real-time.  
- Apply full-stack development skills to create reliable web applications.

## Quiz Questions

\*(5 MCQs with Answers Highlighted)\*

Which database is used in this project?

A) MySQL ✅**A) MySQL✅**

B) PostgreSQL

C) MongoDB

D) SQLite

What does CRUD stand for?

A) Create, Run, Update, DeleteA) Create, Run, Update, Delete

B) Check, Remove, Update, DisplayB) Check, Remove, Update, Display

C) Create, Read, Update, Delete ✅**C) Create, Read, Update, Delete ✅**

D) Collect, Retrieve, Upload, DeleteD) Collect, Retrieve, Upload, Delete

Which framework is used for the frontend in this project?

A) Angular

B) Vue.js

C) React.js ✅**C) React.js ✅**

D) Ember

Why material UI is used in React Applications?

A) To provide a pre-designed, customizable component library ✅**A) To provide a pre-designed, customizable component library** **✅**

B) To handle the state management of React applications

C) To optimize application performance by reducing re-renders

D) To implement server-side rendering easily

Which framework is used for the Backend in this project?

A) Django

B) Flask

C) Express.js

D) SpringBoot ✅**D) SpringBoot ✅**

## Earn a Certificate

After completing the project:  
1. Upload your code for assessment.  
2. Complete the Quiz to assess your knowledge.  
  
You will earn a certificate if you score \*\*80% or more\*\*.

This guide ensures you have a clear roadmap to complete the project successfully and receive certification based on your skills.