**Bytexl’s guided projects**

**Students’ User Guide**

**Bytexl’s Guided Projects: Students' User Guide**

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

Bytexl’s educators have created specialized guided projects so you can practice current technology languages/software such as PHP, Python, Java, Node.js, and more.

In about **2 hours**, you can build a project that enhances your job-relevant skills as your educator guides you through a specially created hands-on experience available on Bytexl’s app.

**INSTRUCTIONS FOR STUDENTS:**

**Project-Based Learning Course Overview**

**About the Project:** This guided project is designed to help you practice and develop your skills in **Web Development using PHP**. You will be guided through the steps of creating a web application involving CRUD operations, form validation, and database integration. This hands-on experience will prepare you for real-world web development scenarios.

**Prerequisites:**

* Basic knowledge of HTML, CSS, and PHP
* Familiarity with web browsers and text editors (e.g., VS Code)
* Nimbus access on Bytexl’s platform

**What will you learn?** You will learn how to build a simple web-based application that allows users to create, read, update, and delete records. This project will also cover database integration using MySQL and introduce the concept of form validation.

**Skills You Will Practice:**

* Web development with PHP
* MySQL database integration
* Implementing CRUD operations
* Form validation and error handling
* Project version control using Git

**How to Execute? Your Learning Platform:**

* Use **Nimbus** on Bytexl’s platform to access all the necessary tools.
* Practice on your **desktop or laptop**. This cannot be developed on mobile phones.

**Nimbus on Bytexl’s Platform:**

* Learn, practice, and enhance job-relevant skills in just **20 hours**.
* Receive detailed instructions from instructors.
* Gain hands-on experience solving real-world case studies.
* Enhance your confidence with solutions developed on Nimbus using the latest tools and technologies.

**Learn Step-by-Step:**

In this guided project, you will follow your educator’s walkthrough to complete the project in approximately **2 hours**.

**Structure for Educators:**

**How to Create the Use Cases for Students to Practice?**

**Welcome to "Professionalism in Web Development Using PHP." This is a guided project which will take about 2 hours to complete.**  
Here are the course objectives and structure:

**Course Objectives:** In this project, we will focus on the following objectives:

* Learn to create a PHP-based web application with CRUD operations.
* Integrate the application with a MySQL database for record management.
* Implement form validation to ensure user input is correct.
* Understand how to handle errors and provide user feedback.

**By the end of this project, you will be able to:**

* Build a dynamic web application using PHP.
* Use MySQL to manage data.
* Validate forms and handle errors in a real-world application.
* Deploy your project on the **Nimbus** platform using the provided tools.

**Course Structure:** This course is divided into **3 parts**:

1. **Course Overview:** This is the introductory reading material where you’ll learn the basics of PHP and MySQL.
2. **Project Structure:** This hands-on project is divided into tasks that help you build a fully functional web application.

**Project Structure:**

The hands-on project on **Professionalism in Web Development using PHP** is divided into the following tasks:

* **Task 1:** Set up your development environment in Nimbus and create a simple PHP web page.
* **Task 2:** Implement database integration with MySQL and create the necessary tables.
* **Task 3:** Build the Create, Read, Update, and Delete (CRUD) functionality.
* **Task 4:** Implement form validation and error handling.

**Meet Your Educator:**

Your instructor, **Aarshi Gupta**, is an expert in web development using PHP and will guide you through every step of the project. Aarshi is dedicated to helping you master PHP and MySQL and become proficient in web development.

**About the Nimbus Platform and Tools Required for This Project:**

Nimbus is Bytexl's powerful IDE, providing all the necessary tools for your web development projects. It supports PHP, MySQL, and Git integration, making it a perfect environment for building professional-grade web applications.

**Expected Outcomes:**

Educators should ensure that the outcomes expected match the tasks and objectives:

* By the end of this project, students will be able to create a working web application using PHP and MySQL.
* They will gain experience in database integration and form validation.
* Students will develop a strong foundation in web development and will be ready for real-world job scenarios.

**Quiz Questions:**

1. **What does CRUD stand for in web development?**  
   A) Create, Retrieve, Update, Delete  
   B) Create, Remove, Update, Delete  
   C) Create, Read, Use, Delete  
   D) Create, Read, Update, Design  
   **Answer:** A) Create, Retrieve, Update, Delete
2. **Which language is primarily used to build the backend of the web application in this project?**  
   A) Python  
   B) Java  
   C) PHP  
   D) JavaScript  
   **Answer:** C) PHP
3. **What is used to store data in the web application?**  
   A) MongoDB  
   B) MySQL  
   C) SQLite  
   D) PostgreSQL  
   **Answer:** B) MySQL
4. **What is the purpose of form validation in web development?**  
   A) To design the user interface  
   B) To ensure user input is correct before submission  
   C) To store data in the database  
   D) To generate reports  
   **Answer:** B) To ensure user input is correct before submission
5. **Which tool will you use to code and test your PHP project?**  
   A) VS Code  
   B) PyCharm  
   C) IntelliJ IDEA  
   D) Sublime Text  
   **Answer:** A) VS Code

**Earn a Certificate:**

After completing the **Professionalism in Web Development using PHP** hands-on project:

1. **Upload your code** for assessment.
2. **Complete the quiz** to assess your knowledge.
3. You will earn a certificate if you score **80% or more**.

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