Problem Statement

Introduction:

In the contemporary landscape of web application development, there is a growing need for a secure and scalable solution that integrates user authentication with a backend database. Many projects often face challenges in implementing a seamless user authentication system that securely stores user credentials and allows for efficient interaction with a relational database.

Problem Description:

The absence of a standardized and easy-to-implement solution for user authentication and database interaction leads to project delays, security vulnerabilities, and inefficient use of development resources. Existing solutions may lack flexibility, robustness, or clear documentation, making it challenging for development teams to integrate authentication seamlessly with a MySQL database.

Objectives:

Our project aims to address these challenges by creating a PHP web application that provides a secure user authentication system tightly integrated with an AWS RDS MySQL database. The primary objectives include:

Develop a PHP application capable of handling user registration, login, and password management securely.

Dockerize the application to ensure consistency across different environments and streamline deployment.

Set up and configure an AWS RDS MySQL database to store user information securely.

Create a Jenkins CI/CD pipeline that automates the building, testing, and deployment processes.

Facilitate easy integration of the application into other projects by providing clear documentation and guidelines.

Target Audience:

This project caters to web developers, software engineers, and development teams working on PHP-based web applications. It is designed to simplify the process of implementing secure user authentication and database interaction within their projects.

Scope:

The scope of this project covers the development of a PHP web application, Dockerization of the application, integration with AWS RDS for MySQL database storage, and the establishment of a Jenkins CI/CD pipeline.

Constraints:

Project development is subject to constraints such as limited budget, resource availability, and the need for compatibility with PHP and MySQL.

Benefits:

Upon successful implementation, this project will offer a standardized and secure solution for user authentication and database interaction, promoting faster development cycles and improved security practices.

Success Criteria:

The project's success will be measured by the seamless integration of the PHP application with AWS RDS, successful automation of the CI/CD pipeline, and positive feedback from the development community regarding ease of use and security.