**Project Title: Product Details Retrieval Servlet Application**

Project Objective: The main objective of this project is to create a servlet-based application that retrieves product details from the database based on the product ID entered by the user. The project will make use of JDBC to handle all database processing and MySQL as the database management system.

Project Scope: This project will involve creating a product table in MySQL and pre-populating it with data. A form will be created to take input from the user for the product ID. On submission of the form, the servlet will validate the input and retrieve the product details from the database. The retrieved product details will be displayed to the user.

Tools and Technologies:

1. Java
2. Servlets
3. MySQL
4. JDBC
5. Eclipse IDE

Project Overview: The project will involve the following steps:

1. Create a product table in MySQL and pre-populate it with data.
2. Create a HTML form that takes input from the user for the product ID.
3. Create a servlet that will handle the form submission.
4. Use JDBC to connect to the database and retrieve product details based on the product ID.
5. If the product ID is not valid, display an error message.
6. If the product ID is valid, display the product details to the user.

Project Implementation:

Step 1: Create a product table in MySQL and pre-populate it with data.

1. Open the MySQL command-line client and create a new database.
2. Create a new table called "products" with columns for product ID, product name, description, price, and quantity.
3. Populate the table with some sample data for testing purposes.

Step 2: Create a HTML form that takes input from the user for the product ID.

1. Create a new HTML file called "index.html".
2. Add a form to the HTML file with a field for the product ID and a submit button.

Step 3: Create a servlet that will handle the form submission.

1. Create a new servlet called "Servlet1".
2. Override the "doPost" method to handle the form submission.
3. Retrieve the product ID entered by the user from the request parameter.
4. Validate the product ID to ensure it is in the correct format.
5. If the product ID is valid, proceed to the next step. Otherwise, display an error message.

Step 4: Use JDBC to connect to the database and retrieve product details based on the product ID.

1. Create a connection to the MySQL database using JDBC.
2. Create a SQL query to retrieve the product details based on the product ID.
3. Execute the query and retrieve the result set.
4. Map the result set to a Product object.
5. Display the product details to the user.

Step 5: If the product ID is valid, display the product details to the user.

Conclusion: In conclusion, this project involves creating a servlet-based application that retrieves product details from the database based on the product ID entered by the user. The project makes use of JDBC to handle all database processing and MySQL as the database management system.

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