Assignment 2: In this assignment, we practice J2EE Database Programming using Servlets.

Part A) Develop the following **Servlets** to interact with a MySQL server (as demonstrated in class):

1) Using MySQL Benchmark,
    - Create a new database in MySQL .
        i. Database Name : As2-yourname
    - Create a new Table in MySQL.
        i. Table Name is **EMP** which has the following structure:

EmpNo	EmpName	Department	EmpJob
Varchar(5), PrimaryKey	Varchar(25)	Varchar(15)	Varchar(20)

2) Develop a Servlet (name it **import-Records**), which add 10 sample records to the **EMP** table records. (Try to use a most optimized way for doing this)
3) Develop a Servlet (name it **show-records**) which displays all records from **EMP** Table in proper format on the browser page. (Use the example in class work which displays the record on the console)
4) Develop the following webform(name it **Register-Form.html**) and apply some Bootstrap CSS.

5) Develop a Servlet (name it **Insert-Form-records**), when user clicks on **Register** button, the program reads the form data and inserts them into the **EMP** table.
    Hint: use the following approach:

```
Var1 = Read_Form_Input;
Var2 = Read_Form_Input;
Connection con=DriverManager.getConnection(ConString);
PreparedStatement stmt=con.prepareStatement("insert into TABLE
values(?,?)");
stmt.setInt(1,Var1); //1 specifies the first parameter in the query
stmt.setString(2,Var2);
stmt.executeUpdate();
```

Part B) Answer the following questions:

- What is JDBC Batch Processing and what are its benefits?

- What is the difference between execute, executeQuery, executeUpdate?
- What is really happening if the conn.close() doesn't occur? Do some research and explain your answer (30~40 words)
- How to do **error handling** in "Insert-form-Records" servlet when user doesn't enter the EMP Number or enter a duplicate EmpNumber? Explain your answer and apply it to the servlet.
  - *Note: The term error-handling is different than dara validation!*

<u>Submission:</u>

1) Take a screenshot of the program execution/output
2) Export the database (.sql)
3) The project file