Project

# Instructor Inputs

# Case Study 1: Earnest Bank Ltd

To create the project solution, the project team needs to perform the following tasks:

1. Analyze the case study to identify the system processes.
2. Create the technology diagram to show the technologies used in the various tiers of the Web application and display the interaction among the various layers of the N-tier Web application.
3. Create the flow diagram to show the logical flow of the application.
4. Create the use case diagram to show the functional requirements of the application.
5. Create the ER diagram to show the relationships between the various database tables.
6. Create the **EarnestBank** database
7. Create the table relationship diagram.
8. Create the logon module (containing a JSP page) for accepting the logon information such as the bank customer ID, and the password, a JSP page redirecting the online bank customer to check the banking transaction details on successful authentication, and a JavaBean to validate online bank customer's logon credentials.
9. Create the registration module by creating three components: a JSP page to input new online bank customer information, a JSP page to send the new user information to a JavaBean, and a JavaBean to store new bank customer information in the database.
10. Create three JSP Pages. The first JSP page will be a welcome page for the online banking application. The second JSP page will display the bank account information depending upon bank account type. The third JSP page will display the loan criteria details.
11. Create a JSP page to input the account number or loan number, a JSP page to display the bank account balance status, a JSP page to display the bank transaction status, a JSP file to display the loan application status, and servlets to access the database to display the required results.
12. Create a module to display the loan rates and interest rates in different currencies.
13. Debug the Java files in case of any errors.
14. Document the project by using the formats given in this document.
15. Submit the documentation to the faculty.

# Case Study 2: FlyMyWay Airlines

To create the project solution, the project team needs to perform the following tasks:

1. Analyze the case study to identify the system processes.
2. Create the technology diagram to show the technologies used at the various tiers of the Web application and display the interaction among various the layers of the N-tier Web application.
3. Create the flow diagram to show the logical flow of the application.
4. Create the use case diagram to show the functional requirements of the application.
5. Create the ER diagram to show the relationships between the various database tables.
6. Create the **FlyMyWaySystem** database.
7. Create the table relationship diagram in the SQL server.
8. Create the logon module (containing a JSP page) for accepting the logon information such as the customer ID and the password, a JSP page redirecting the customer to book tickets online on successful authentication, and a JavaBean to validate the customer's logon credentials.
9. Create the registration module by creating a JSP page to input new customer registration information, a JSP page to send the new customer registration information to a JavaBean, and a JavaBean to store new customer registration information in the database.
10. Create Core Module 1 by creating a JSP welcome page for the OFRS system, a custom tag to maintain uniformity in size, font, and color in displaying messages across all the pages in the application, a JSP page to display the flight information, and a servlet to access the database to display the flight information.
11. Create Core Module 2 by creating a JSP page to accept the customer details to book the flight tickets and a servlet to store the ticket booking details in the database.
12. Create a module to display the hotel information.
13. Debug the Java files in case of any errors.
14. Document the project by using the formats given in this document.
15. Submit the documentation to the faculty.

# Case Study 3: ABC Corp

To create the project solution, the project team needs to perform the following tasks:

1. Analyze the case study to identify the system processes.
2. Create the technology diagram to show the technologies used in the various tiers of the Web application and display the interaction among the various layers of the N-tier Web application.
3. Create the flow diagram to show the logical flow of the application.
4. Create the use case diagram to show the functional requirements of the application.
5. Create the ER diagram to show the relationships between the various database tables.
6. Create the **MyAuctionDatabase** database.
7. Create the table relationship diagram in the SQL server.
8. Create the logon module (containing a JSP page) for accepting the logon information such as the auction ID and the password, a JSP page redirecting the customer to participate in online auctions after successful authentication, and a JavaBean to validate the customer's logon credentials.
9. Create the registration module by creating a JSP page to input new customer registration information, a JSP page to send the new customer registration information to a JavaBean, and a JavaBean to store new customer registration information in the database.
10. Create Core Module 1 by creating a JSP welcome page for the OAS system, a custom tag to maintain uniformity in size, font and color in displaying messages across all the pages in the application, a JSP page to display the auction details information, and a servlet to access the database to display the auction information.
11. Create Core Module 2 by creating a JSP page to accept the customer auction bid information, a servlet to store the customer ID in a database, a servlet to determine the highest bidder, and a JSP file to display the highest bidder.
12. Create a module to display the bidding price in different currencies.
13. Debug the Java files in case of any errors.
14. Document the project by using the formats given in this document.

# Case Study 4: GroupFund Bank

To create the project solution, the project team needs to perform the following tasks:

1. Analyze the case study to identify the system processes.
2. Create the technology diagram to show the technologies used in various tiers of the Web application and display the interaction among the various layers of the N-tier Web application.
3. Create the flow diagram to show the logical flow of the application.
4. Create the use case diagram to show the functional requirements of the application.
5. Create the ER diagram to show the relationships between the various database tables.
6. Create the **GroupFundBank** database.
7. Create the table relationship diagram.
8. Create the logon module ( a JSP page) for accepting the logon information, such as the username and the password, which will redirect the customer to their respective home page.
9. The following JSP pages needs to be created for an administrator:
   a. **products.jsp**: This page will display a list of all products and services that the bank provides.
   b. **branches.jsp**: This page will display a list of all branches of the bank. The list will be grouped on the basis of branch location.
   c. **servicedesk.jsp**: This page will display a list of all service desk counters of the bank. The list will be grouped on the basis of branch id.
   d. **bankingofficer.jsp**: This page will display a list of all banking officers. The list will be grouped on the basis of branch id.
10. The central display system should be made by creating a JSP page that is refreshed automatically after every five minutes.
11. When the JSP page of the central display system is refreshed, you can execute a simple **Select Top** query to fetch the new top n records from the database.
12. Debug the files in case of any errors.
13. Document the project by using the formats given in this document.
14. Submit the documentation to the faculty.

# Case Study 5: GoodHealth Inc

To create the project solution, the project team needs to perform the following tasks:

1. Analyze the case study to identify the system processes.
2. Create the technology diagram to show the technologies used in various tiers of the Web application and display the interaction among the various layers of the N-tier Web application.
3. Create the flow diagram to show the logical flow of the application.
4. Create the use case diagram to show the functional requirements of the application.
5. Create the ER diagram to show the relationships between the various database tables.
6. Create the **GoodHealth** database.
7. Create the table relationship diagram.
8. The Out-patient should be charged for every appointment that he/she seeks.
9. The In-patient should be charged for every visit made by the doctor.
10. The doctors/nurses should be assigned to a patient on the basis of the timings of the doctors/nurses.
11. Create the logon module (a JSP page) for accepting the logon information, such as the username and the password, which will redirect the customer to their respective home page.
12. Create a separate JSP page for users in administrator, Desk officer, and senior management group.
13. Debug the files in case of any errors.
14. Document the project by using the formats given in this document.
15. Submit the documentation to the faculty

# Sample Case Study 6: Music, Inc. Online Application

Ensure the following before conducting the session:

- NetBeans5.5.1 bundled with Sun Java Application Server Update 9.0 and JDK 1.5 is installed on the faculty node.

To execute the solution for Music, Inc., first create the **MusicInc** database and then execute the project solution by unzipping the **Music.zip** from the **TIRM/PROJECT SOLUTION** folder and executing the application.

# Project Execution

The guidelines for project allocation and evaluation are:

- The project must be allocated to the students by the end of the second cycle.
- You can create groups of two students each and allot different case studies to each group.
- During allocation, explain the scope of the project to the students by referring to the topics Project Activities and Project Timelines.
- Ask the students to refer to the sample case study and its solution provided in the Sample Project documentation.
- Ask the students to refer to the topic Project Standards and Guidelines before starting the project documentation.
- Ask the students to fill the appropriate documentation formats at each stage of project development.
- Inform the students to create databases as per the requirements.
- Demonstrate the sample solution by using the data files provided in the **Project_Solution** folder of the TIRM CD.
- Evaluate the students according to the guidelines provided in the topic Project Evaluation Guidelines.