**Design Based Experiment No-1**

**Advanced Java Programming – Even Semester 2013-14**

**Handout Date: 25/2/20141**

**Duration: 3-4 weeks**

**Submission Date: 17/3/2014**

**Presentation dates: 20/3/2014**

**Total Marks: 10**

**Instructions to students:**

- You can make use of the library resources to find information.
- Present the relevant references /citation at the end of the report.
- Marks will be awarded for the content written in your own words.
- If two or more documents (different group) contain duplicate information marks will be deducted as per plagiarism policy.

**Note: This is a group activity based design experiment; any request of working alone will not be acceptable. (You will learn the working in a team, team management and leadership skills)**

**Objective:**

The aim of this design experiment is to give the students an overview of Advanced Object Oriented Programming techniques during the application development process.

**Learning Outcomes: At the ends you will be able to**

1. Understand the meaning of analyze the problem.
2. Identify and define the requirements for the applications keep "Software Engineering Models" concepts in mind.
3. Analyze and design a computer-based solution to a clearly defined problem using object oriented techniques
4. Apply design and development principles in the construction of software systems of varying complexity.

**Tasks: Read the following scenario, understands and present your response for the tasks assigned in a documented for not more than 10 pages.**

**Note:** Use appropriate tools Java Platform and databases as appropriate ***(Any other tool like designing in word will not be acceptable and student will be given zero marks)***

## Description of the Scenario

**"A Book Store Management System"**

This scenario describes the study to construct the design elements for a web-based book store management system that can be used to improve the profit of ABC Book Company Pvt. Ltd. The proposed system is called "BSMS at ABC".

The proposed system is a web-based book store management system that provides:

1. Efficient and easy techniques to manage the books.
2. Helps the customers to see the available books in the store which will be helpful to increase the profit.
3. A simple user interface that facilitates the interaction with the system.
4. Administration tools that provide capabilities for implementing online shopping facility for the books.

**Based on the above narration, do the following tasks:**

**Task-1** **Server Side** **5 Marks**

**1:** Create an interface LibrarySessionBeanRemote.

**2:** In the interface create declare methods addBook (String bookName) and getBook () with return type void and List respectively.

**3:** Write a class LibrarySessionBean to implement the interface created.

**4:** In the class LibrarySessionBean declare an object bookShelf of List class. Initialize the object.

**5:** write the definition of the method declared in the interface.

**6:** Build project and make it ready to receive the client request.

**Task-2** **Client Side:** **5 Marks**

**7:** create a class EJBTester.

**8:** declare an object brConsoleReader of BufferReader class and assign the value null.

**9:** Declare objects props and ctx of Properties and InitialContext class respectively.

**10:** write an appropriate code to display the following output:

**Sample Output:**

```
**********
Welcome to Book Store
**********
Options
1. Add Book
2. Exit
Enter Choice: 1
Enter book name: Learn Java
**********
Welcome to Book Store
**********
Options
1. Add Book
2. Exit
Enter Choice: 2
Book(s) entered so far: 1
1. Learn Java
***Using second lookup to get library stateless object***
Book(s) entered so far: 0
BUILD SUCCESSFUL (total time: 13 seconds)
```

**Instruction:**

- Answer all the given questions/tasks.
- One consolidated report should be submitted from each student.
- The report should contain the following:
  - Title Page (includes Title of the design experiment, Names of the student, Student ID, Department Name, Semester Name, Academic Year)
  - Table of Contents (Topics covers and page number)
  - Answer for tasks given.
  - References (book, journals, internet resources used in preparing the presentation report/slides or others)
- Student has to submit the report to the e-mail ID provided also.
- Each individual will have one presentation schedule and should be present, unless due to illness. Otherwise, no marks will be awarded to the absent student. The absent candidate will be scheduled for another presentation and should present the whole case study.

**Guidelines**

Follow the guidelines mentioned below for your case study.

- Reports/answers should be **typed** by group members and individual should be clear about each part of the report and should be ready to answer for question (s) asked at the time of presentation.
- **Handwritten report will not be accepted**
- The report should have a Title Page. Title Page should contain the following information.
  - Subject Name and Subject Code
  - Student name
  - Student ID
  - Department Name
  - Semester Name
  - Academic year
- It should have Table of Contents
- Use page numbers when you are preparing a report.
- Limit the number of points in presentation slides to **4** points per page.
- Presentation report should be typed in your own words using **Times New Roman font size 12.**
- Presentation report heading should be with **Font Size 14, Bold, Underline**
- Use caption for each diagram with diagram number.
- Library and internet resources can be used for finding information.
- Marks will be awarded for the content written in your own words.
- Copy paste from the Internet is strictly not acceptable.
- Reference should be included in the last page as follows
  - Author name, Book Title, Publisher, Year in case of books
  - In case of web site references type the full path of the web page with referenced date
  - In case of magazines/ periodicals type article name, magazine name, Issue Number and date

**Rules & Regulations**

- If any topic or diagram of report is found copied from the other then marks will be deducted from both reports.
- The purpose of design experiment is to do some brain storming so you can consult books in Library or use internet or computer magazines or any other source.

**Design Experiment and Presentation**

**Advanced Java Programming Even Semester 2014**

**Evaluation Grid**

| Deliverables | 0 | 1 | 2 | 3-4 | 5 | Marks |
|---|---|---|---|---|---|---|
| **Task-1** | Incomplete/ Weak/Plagiarized work | Partially answer without presentation | Partial answer and presentation is ok | Satisfactory | Complete and accurate in all aspects | |
| **Deliverables** | **0** | **1** | **2** | **3-4** | **5** | **Marks** |
| **Task-2** | Incomplete/ Weak/Plagiarized work | Partially correct without appropriate definition of operations | Partially correct but not in all aspects | Satisfactory | Complete and accurate in all aspects | |
| **Total Marks Obtained** | | | | | | |

**** Marks will totally depend on your performance in the presentation of each task. Just providing the answer will not give any benefits to you.**

**** Any students fail to come for presentation will be awarded zero marks.**

**Date of submission and presentation**_____

| S No | Student Id | Student Name | Total Marks Scored out of 10 | Penalty | Final Mark obtained |
|---|---|---|---|---|---|
| **1** | | | | | |

**Signature of Faculty**