



BHARATI VIDYAPEETH'S

INSTITUTE OF COMPUTER APPLICATIONS & MANAGEMENT (BVICAM)

(Affiliated to Guru Gobind Singh Indraprastha University, Approved by AICTE, New Delhi)

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Course Code: MCA-109

Course Name: Java Programming

Assignment 3

(Based on Unit-IV)

- Q 1. Incorporate the concept of **Reflection** to inspect the methods of an Employee class, storing emp_id, emp_name and emp_dept. Demonstrate the use of the following concepts:
- a. Methods class
 - b. Field class
 - c. Constructor class
- Q 2. Elaborate in detail the concept of **Remote Method Invocation (RMI)**. Discuss the significance of marshalling and un-marshalling in the RMI concept.
- Q 3. Implement a **RMI application**. The server object maintains a **HashMap** of Department and Employee names and provides a remote method getEmployeeNames that takes a department name as parameter. The client should attain a remote reference to the remote object and call the remote method to satisfy user queries.
- Q 4. Construct an **RMI application** that exposes a remote object *School*. It should have two remote methods *admit* and *search*. The method *admit* should add a student's record in the list of available students and search should return the details of student on basis of roll number entered or raise an exception in case of invalid roll number. Demonstrate the use of these methods in a RMI client application.
- Q 5. Illustrate your understanding of **Java Beans**? Explain the different types of Beans available and. How do you pack a Bean using **JAR tool**?
- Q 6. Design the logic for a **java bean** to preview image files. The bean should have properties: file name, width and height for generating the preview. The bean should use these properties to generate the preview of the image file.
- Q 7. Construct a **java bean** to preview text files. The bean should have two properties: file name and lines previewed. The bean should use these properties to generate the preview of a text file (display initial set of lines on the bean UI).