



ABES Engineering College, Ghaziabad
Department of Computer Science
Object Oriented Programming with Java Lab
(BCS- 452)



Session-2023-2024

List of Experiments as per university syllabus:

1. Create simple java programs using command line arguments

- (a) WAP that takes input from user through command line argument and then prints whether a number is prime or not.
- (b) Write a program to enter number through command line and check whether it is palindrome or not.

2 Use Java compiler and eclipse platform to write and execute java program

- (a) Write a program to print addition of 2 matrices in java
- (b) Write a program in java which creates the variable size array (Jagged Array) and print all the values using loop statement.

3. Understand OOP concepts and basics of Java programming

- (a) Write a Java program to create a class called "Person" with a name and age attribute. Create two instances of the "Person" class, set their attributes using the constructor, and print their name and age.
- (b) Write a Java program to create a class called Person with private instance variables name, age. and country. Provide public getter and setter methods to access and modify these variables.

4. Create Java programs using inheritance and polymorphism

- (a) "Java does not support multiple inheritance but we can achieve it by interface". Write a program to justify the above statement.
- (b) Write a program in java to implement the following types of inheritance:
 - Single Inheritance
 - Multilevel Inheritance

5. Implement error-handling techniques using exception handling and multithreading.

- (a) Write a Java program to implement user defined exception handling for negative amount entered.
- (b) Write a program in java which creates two threads, "Even" thread and "Odd" thread and print the even no using Even Thread after every two seconds and odd no using Odd Thread after every five second.

6. Create java program with the use of java packages

- (a) Create a package named "Mathematics" and add a class "Matrix" with methods to add and subtract matrices (2x2). Write a Java program importing the Mathematics package and use the classes defined in it.

7. Construct java program using Java I/O package

- (a) Write a program in java to take input from user by using all the following methods:
 - Command Line Arguments
 - DataInputStream Class
 - BufferedReader Class
 - Scanner Class
 - Console Class

8. Create industry-oriented application using Spring Framework.
9. Test RESTful web services using Spring Boot.
10. Test Frontend web application with Spring Boot.

List of Experiments beyond syllabus:

11. CRUD Operations using REST API using ArrayList or Map.
12. CRUD Operations using H2 Database.

Signature of HOD

Signature of Lab Coordinator