0944 -DIPLOMA IN INFORMATION TECHNOLOGY & ENGINEERING
SEMESTER -I
094453 INTERNET PROGRAMMING USING JAVA

RATIONALE

Today, the most likely place you will find Java is on World Wide Web. The web acts as convenient transport mechanism for Java programs and the web's ubiquity has popularized Java as an Internet development tool. Java has shifted the programming paradigm of single machine to distributed network of machines. Any application on World Wide Web can be easily implemented. Internet can have numerous applications and various protocols. This course will enable the students to learn in detail network programming language Java.

DETAILED CONTENTS

1. Introduction to Java

A brief history, How Java Works. Java Virtual Machine (JVM), Java in time compiler (JIT), Java features, using Java with other Tools, Native code, Java Application types, compression with C+ and C++

2. Working with Data types:

Control flow statements, Arrays, Costing, command line arguments

3. Java Classes and Memory Management

Introduction to Classes, inheritance, encapsulation and Polymorphism, constructors and Finalizers, Garbage collection, Access specifier

4. Interfaces and Packages

Using Java interface, using Java Packages

5. Exception Handling and Stream Files

Over view of exception handling, Method to use exception handling, Method available to exceptions (The throw statement, The throws class, Finally class), Creating your own exception classes.

6. Threads and Multi-threading

Overview, Thread Basics - Creating and running a thread, The thread control methods, The threads life cycle and synchronization.

7. Introduction to Applet, Application and JDK

Java Applets Vs Java Applications, Building Application with JDK, Building Applets with JDK, HTML for Java Applets, Managing input-output stream

8. Java Data Base Connectivity (JDBC)

LIST OF PRACTICALS

1. a) Write a program which tells whether a number is even or odd. Take a range from 1 – 50
   b) Display the output which is given below:

```
*
* *
```

* * *

c) Write a program which sorts an array of type integer

d) Write a programme to determine the sum of the following harmonic series for a given value of n: 1+1/2+1/3……..+1/n the value of n should be given interactively through the keyboard

2. Write a programme to convert the given temperature in Fahrenheit to Celsius using the following conversion formula
   C = F.32/1.8 and display the value in a tabular form
3. Write a programme to find the number of and sum of all integers greater than 100 less than 200 that are divisible by 7
4. Given a list of marks of ranging from 0 to 100, write a programme to compute and print the number of student should have obtained marks (a) in the range 81 to 100 (ii) in the range 61 to 80 (c) in the range 41 to 60 (d) in the range 0 to 40. The programme should use a minimum number of if statement
5. Admission to a professional course is subject to the following conditions:
   a) Marks in mathematics >=60
   b) Marks in physics >=50
   c) Marks in chemistry >=40
   d) Total in all 3 subjects >=200

   (OR)

   Total in mathematics and physics >=150 given the marks in the 3 subjects. Write the programme to process the application to list the eligible candidates
6. The number in the sequence 1 1 2 3 5 8 13 21 ……. are called fibonacci numbers. Write programme using a do ….. while loop to calculate and print the first m fibonacci numbers (Hint: after the first 2 numbers in the series, each number is the sum of the 2 preceding the numbers)
7. Write a programme to evaluate the following investment equation V=P (1+r)n and print the tables which would give the value of v for various combination of the following values of P, r and n.

RECOMMENDED BOOKS

5. Mastering Java by John Zukowski; BPB Publication, New Delhi
6. The Complete Reference by Patrick Naughton, Tata McGraw Hills, New Delhi
7. Java Programming by Balagurusamy
8. Set of Books on Java by Sun Microsystems
9. Java 2 Programming Bible by Aaron Walsh, Justin Couch, Daniel Steinberg, IDG Books India Pvt. Ltd., Netaji Subhash Marg, Darya Ganj, New Delhi
10. Java 2 Swing, Servlets, JDBC and Java Beans Programming Black Book by steven Holzner, IDG Books India Pvt. Ltd., New Delhi
11. Java Pogramming- “How to Program Java” by Dietal and Dietel
12. An Introduction to Java Programming by Y Daniel Liang; Prentice Hall of India
13. The Complete Reference Java by Herbel Schildt; McGraw Hills, New Delhi
14. Core Java by Cay S Horseman and Lray Carnell.
15. Introduction to Cryptography with applets by David Bishop, Narosa Publishing House Pvt Ltd, Darya Ganj, New Delhi 110002