Essentials of Information Technology

Introduction to the module

Prerequisites for this module

- Nil

Purpose

- **To introduce the concepts of Advance Java Programming**

Learning Outcomes

At the end of this lesson, YOU should be able to:

- Study fundamental concepts of Java.
- Design of user interfaces using Java applets.
- To study and implement JDBC and JBeans.
- To study concepts of servlets and its applications.

Topics we will cover

Unit 1 : Introduction

Importance and features of Java,
Concepts of Java Virtual machine (JVM),
Keywords, Constants, Variables and data types,
operators and expressions,
Control statements,
Conditional statements,
loops and iterations.
Class definition,
adding variables and methods,
creating objects, constructors,
defining methods, calling methods,

Topics we will cover

Unit 1 : Introduction

Method overloading.
Creating an array, one and two dimensional array,
string array and methods
String and String Buffer classes,
Wrapper classes.
Packages and Interfaces,
Exception handling.

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Topics we will cover

Unit 2 Design of User Interface

- Design of User Interfaces: Swing, Applet, Icons and Labels, Text Fields, Buttons, button Class, Check Box, Radio Buttons,
- The Container, Panel, Windows, and Frame Classes,
- Combo Box, Tabbed Panes, Scroll Panes, Trees, Tables.

Topics we will cover

Unit 3 Servlets

- Introduction to Servlets, Life cycle of Servlets, Creating, Compiling and running servlet, Reading the servlet Parameters, Reading Initialization parameter,
- Packages- javax.servletPackage, Handling HTTP Request and Response (GET / POST Request),
- Cookies and Session Tracking.

Topics we will cover

Unit 4: Advance Java

- Collection, list, Map, Tree, Hashing.

JDBC

- JDBC Fundamentals,
- Establishing Connectivity and working with connection interface, working with statements,
- Creating and Executing SQL statements,
- Working with Result Set Object & Result Set Meta Data.

What is expected of you

- Attendance & Punctuality
- Participation in class-work
- Observe rules and regulations

What support is available for you

- FTP
  - Slides
- Consultation hours
- Email
- Resources
  - Reference material
  - Internet resources

How you will be assessed

No.	Description	Marks Distribution (%)
1.	Major Test	75
2.	Minor Test	25
	Total	**100**

How you will be assessed

University Exam Pattern

- Eight questions will be set in all by the examiner taking at least two questions from each unit.
- Students will be required to attempt five questions in all at least one from each unit.

References

Books on Java

1. Gary Cornell and Horstmann Cay S., Core Java, Vol I and Vol II, Sun Microsystems Press.
2. Herbert Schildt, Java: The Complete Reference, McGraw-Hill.
3. Philip Hanna, JSP: The Complete Reference, McGraw-Hill.
4. Deital and Deital, Java How to Program, Prentice Hall (2007).

Question and Answer Session

Q & A