**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVEN SEMESTER**

**Name of Teacher: ANITA YADAV**

**Designation: Extension Lecturer**

**Class: BCA-III Year ( 6th Semester)**

**Subject/ Paper: Advance V.B.**

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** | **Remarks** |
| **1.** | **January** | Collections: Adding, Removing, Counting, Returning Items in a Collection, Processing a Collection; Working with Forms: Form Properties, Creating, Adding, Removing Forms in Project, Adding Multiple Forms, Managing Forms at Run Time, Hiding & Showing Forms, Load & Unload Statements, Drag and Drop Operation, Activate & Deactivate events, Form-load event, Example using Forms, Programs in VB using Forms. | **Outlining** | **Student will be able to work with multiple forms** | **Oral Discussion** |
| **2.** | **February** | Working with Menu: Menu Designing in VB, Adding a Menu to a Form, Modifying and Deleting Menu Items, Adding Access Characters, Adding Shortcut Keys, Manipulating Menus using Common Dialog Box, Attaching Code to Events, Creating Submenus, Dynamic Menu Appearance Advanced Controls in VB: Scroll Bar, Slider Control, Tree View, List View, Rich Text Box Control, Toolbar, Status Bar, Progress Bar, Cool bar, Image List Program Development in VB using Menus and Advance Controls | **Group**  **discussion** | **Students will be able to create different types of menus** | **Assignment-1** |
| **3.** | **March** | File Handling & File Controls: Sequential & Random files, Opening and Closing Data Files, Viewing the Data in a File, Performing Operations on a File, Creating a Sequential Data File, Writing Data to a Sequential File, Reading the Data in a Sequential File, Finding the End of a Data File, Locating a File, Reading and Writing a Random File (get, put, LOF, seek). Working with Graphics: Using Paint, Line, Circle, Manipulating Graphics Program Development in VB using Files and Graphics. | **Questioning** | **Students will be able to learn about data handling using files** | **Class Test** |
| **4.** | **April** | Accessing Databases: Data Controls, Data-Bound Controls, DAO, RDO, ADO, Creating the Database, Setting Properties, Applying Operations on Database, Viewing the Database, Updating the Database (adding, deleting records) Program Development in VB using Database and Advance Controls | **Make them to explain their understanding about the topic to other student** | **Student will learn about accessing different type of databases** | **Assignment-2** |

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**Signature of Teacher Principal**

**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVENSEMESTER**

**Name of Teacher** :Mr. Pardeep Kumar

**Designation :**Assistant Professor

**Class :**BCA 6th Sem

**Subject/ Paper :**Programming In Core Java

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** |
| **1.** | **January** | Object Oriented and Java Fundamentals.  Data types, Looping Constructs. | **Active Learning** | **Understanding the power of Java language** |
| **2.** | **February** | Nested Class and Inner Class, Buffer Reader, Strings and array | **Active Learning** | **Dynamic arrays** |
| **2.** | **March** | Inheritance, interfaces and Packages | **Active Learning** | **Learning to create packages** |
| **3.** | **April** | Exception Handling, Applets and awt | **Logical** | **Making code more robust** |
| **4.** | **May** | Revision | **Code implementation through smart screen** | **Implementation and developing small applications** |

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**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVENSEMESTER**

**Name of Teacher**:REEMA GUPTA

**Designation:ASSISTANT PROFESSOR**

**Class:BCA III**

**Subject/ Paper:ADVANCE WEB DESIGNING**

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** | **Remarks** |
| **1.** | **JANUARY** | Interactivity Tool - JavaScript: Introduction, Features, Data types, Operators, Statements, Functions,  Event Handling, Use of Predefined Object and Methods, Frames, Windows, Tables, Images, Links  Interactivity Tool - VBScript: Introduction, Features, Variables, Data Types, Numeric and Literal  Constants, Arrays, Operators, Subroutine Procedures | **Learning through problem solving: Practical in the labs** | **Understand the basics, syntax of javascript**  **Learn about javascript events, functions and objects.**  **Learn to write VBScript code to interact with web pages and applications.** |  |
| **2.** | **FEBRUARY** | Function Procedures, Control Statements,  Strings, Message and Input Boxes, Date and Time, Event Handlers, Embedding VBScript in HTML,ASP:Introduction,Features, Client-Server Model, Data Types,  Decision Making Statements, Control statements, Use of Various Objects of ASP, Various  Techniques of Connecting to Database,Macromedia Flash, Macromedia Dreamweaver, PHP: Basic Introduction  and Features | **Peer Teaching** | **Understand functions and statements of VBscript.**  **Learn to create dynamic web pages using ASP.**  **Understand how to use ASP objects**  **Understand the basics and syntax of PHP**  **Create interactive multimedia content using flash and Use of dreamweaver.** | **ASSIGNMENT 1** |
| **3.** | **MARCH** | DHTML: Introduction, Features, Events, Dynamic Positioning, Layer Object, Properties of STYLE,  Dynamic Styles, Inline Styles, Event Handlers; Cascading Style Sheets (CSS): Basic Concepts,  Properties, Creating Style Sheets; Common Tasks with CSS: Text, Fonts, Margins, Links, Tables,  Colors; Marquee; Mouseovers; Filters and Transitions; Adding Links; Adding Tables; Adding Forms;  Adding Image and Sound; Use of CSS in HTML Documents Linking and Embedding of CSS in  HTML Document | **Learning through problem solving: Practical in the labs** | **Learn to use DHTML to create interactive web pages**  **Understand how to use DHTML to create tables and objects.**  **Learn to use CSS to style text, to create visual effects, to control web page layouts.** | **ASSIGNMENT 2**  **QUIZ** |
| **4.** | **APRIL** | Microsoft FrontPage: Introduction, Features, Title Bar, Menu bar, FrontPage Tool Bar, Style,  FontFace and Formatting Bar, Scroll Bars  XML: Introduction, Features, XML Support and Usage, Structure of XML Documents, Structures in  XML, Creating Document Type Declarations, Flow Objects, Working with Text and Font, Color and  Background Properties; | **Learning through problem solving: Practical in the labs,**  **Peer Teaching** | **Understand the basics of Microsoft Frontpage and design web page using FrontPage.**  **Learn to create and validate XML documents.**  **Understand how to use XML to structure and organize the data.** |  |

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**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVENSEMESTER**

**Name of Teacher**: Anita Soni

**Designation:Assistant Professor**

**Class: BCA III 6th Sem**

**Subject/ Paper:Internet Technologies**

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** | **Remarks** |
| **1.** | **January** | Internet: Introduction; History; Internet Services; TCP/IP: Architecture, Layers, Protocols; TCP/IP model versus OSI Model; World Wide Web (WWW) - The Client Side, The Server Side, Creating and Searching Information on the Web, Popular Search Engines, URL, HTTP, Web Browsers, Chat &Bulletin Board, USENET & NNTP (Network News Transfer Protocol); Internet vs. Intranet; | * **Layer-by-Layer Explanation: Start with the basic concepts of each layer (Application, Transport, Internet, Network Access) and explain their individual functions within the TCP/IP model.** | **Beginning of Internet**  **Client server model**  **TCP/IP Model vs OSI model** | **Assignment1** |
| **2.** | **Feb** | TCP, UDP and IP Protocols, Port Numbers; Format of TCP, UDP and IP; IPv4 addressing; The need for IPv6; IPv6 addressing and packet format; TCP Services; TCP Connection Management; Remote Procedure Call; IP Address Resolution- DNS; Domain Name Space; DNS Mapping; Recursive and Iterative Resolution; Mapping Internet Addresses to Physical Addresses: ARP, RARP, DHCP; ICMP; IGM | * **Discuss common applications that utilize TCP (like email, web browsing, file transfer) and UDP (like live streaming, online gaming) to illustrate how protocol selection impacts user experience.** * **Packet Capture: Utilize network sniffing tools to capture live network traffic, allowing students to analyze packets and see how TCP and UDP headers are structured.** | **services of internet** | **Assignment2** |
| **3.** | **March** | Application Layer: Electronic Mail: Architecture; Protocols - SMTP, MIME, POP, IMAP; Web Based Mail; File Access and Transfer: FTP, Anonymous FTP, TFTP, NFS; Remote Login using TELNET; Voice and Video over IP: RTP, RTCP, IP Telephony and Signaling, RSVP; | **Learn the SMTP definition and SMTP protocol. Find what protocol sends an email to a mail server. Explore mail transfer, SMTP servers, and how SMTP works.**  **And various other protocols** | **Various Protocol Internet** | **Test** |
| **4.** | **April** | Routing in Internet: RIP, OSPF, BGP; Internet Multicasting; Mobile IP; Private Network Interconnection: Network Address Translation (NAT), Virtual Private Network (VPN); Internet Management and SNMP; Internet Security: E-Mail Security; Web Security; Firewall; Introduction to IPSec and SSL; | **Internet Routing" would likely cover key concepts like different routing protocols (RIP, OSPF, BGP), network topology, packet forwarding, routing table management, configuration practices, troubleshooting techniques, and real-world application scenarios** | **Learning Internet Management and security** | **Discussion of previous year question papers** |

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**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVENSEMESTER**

**Name of Teacher:DR. SEEMA**

**Designation:ASSISTANT PROFESSOR**

**Class:BCA 3RD YEAR**

**Subject/ Paper:OPERATING SYSTEM-II (BCA-362)**

**Type of course( major/ minor/ VAC/ AEC/SEC/ MDC): NON-NEP**

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** | **Remarks** |
| **1.** | **JAN** | Directory Structure: Single Level, Two Level, Tree Structures, Acyclic Graph, General Graph; Directory Implementation, Recovery Secondary Storage Structure: Disk Structure, Disk Scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK; Selection of Disk Scheduling Algorithm; Disk Management; Swap Space Management Network  Operating Systems: Remote Login, Remote File Transfer; Distributed Operating System: Data Migration, Computation Migration, Process Migration  Linux: Introduction, Features, Architecture, Distributions, Accessing Linux System, Login/Logout/Shutting Down, Comparison of Linux with other Operating Systems, | **Problem Solving** | Will be able to control access to a computer and the files that may be shared | **ASSIGNMENT1** |
| **2.** | **FEB** | Commands in Linux: General-Purpose Commands, File Oriented Commands, Directory Oriented Commands, Communication Oriented Commands, Process-Oriented Commands, Redirection of Input and Output, Pipes. Linux File System: Types of Files in Linux, File Attributes, Structure of File System, inode, File Permission, File System Components, Standard File System, File System Types, Disk Related Commands Processes in Linux: Introduction, Job Control in Linux using at, batch, corn & time commands | **Group based learning, Individual learning** | Apply the knowledge of mathematics,  science fundamentals, and specialization to the solution of complex problems. | **TEST** |
| **3.** | **MARCH** | The vi editor: Introduction, Modes of vi Editor, Command in vi Editor Shell Programming: Introduction, Shell Variables, Shell Keywords, Operators, Assigning Values to the Variables, I/O in Shell, Control Structures, Creating & Executing Shell Programs in Linux. Process Synchronization: The Critical Section Problem – Single Process/Two Process Solutions | **Group learning** | Demonstrate the knowledge of the components  of computer and their respective roles in  computing. | **UNIT TESTS** |
| **4.** | **APRIL** | Semaphores – Types, Implementation, Deadlocks and Starvation; Classical Problems of Synchronization – The Bounded Buffer Problem, The Readers and Writers Problem, The Dining- Philosophers Problem, Critical Regions, Monitors. | **Problem solving** | Ability to recognize and resolve user problems with standard operating environments. Gain practical knowledge of how programming  languages, operating systems, and architectures interact and how to use each effectively | **ASSIGNMENT 2**  **REVISION** |

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**GOVT. P.G. COLLEGE FOR WOMEN, SECTOR-14, PANCHKULA**

**LESSON-PLAN (Session 2024-25) EVEN SEMESTER**

**Name of Teacher: Sapna Malik**

**Designation: Extension Lecturer**

**Class: BCA-IIIrd Year (6th Semester)**

**Subject/ Paper: Computer Graphics (BCA-363)**

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| **S. No.** | **Month** | **Topics to be covered** | **Teaching Learning Strategy** | **Learning Outcomes of Students** | **Remarks** |
| **1.** | **January** | Introduction to Computer Graphics; Interactive and Passive Graphics; Applications of Computer Graphics; Display Devices: CRT; Random Scan, Raster Scan, Refresh Rate and Interlacing, Bit Planes, Color Depth, Color Palette, Color CRT Monitor, DVST, Flat-Panel Displays: Plasma Panel, LED, LCD; Lookup Table, Interactive Input Devices, Display Processor, General Purpose Graphics Software, Coordinate Representations; | **Outlining** | **Student will be able to understand basic components of Graphics and different types of I/O devices** | **Oral Discussion** |
| **2.** | **February** | Point-Plotting Techniques: Scan Conversion, Scan-Converting a Straight Line: The Symmetrical DDA, The Simple DDA, Bresenham’s Line Algorithm; Scan-Converting a Circle: Circle drawing using Polar Coordinates, Bresenham’s Circle Algorithm, Scan-Converting an Ellipse: Polynomial Method, Trigonometric Method; Polygon Area Filling: Scan-line Fill and Flood Fill Algorithms; | **Group**  **discussion** | **Students will be able to understand different types of Line drawing algorithms** | **Assignment-1** |
| **3.** | **March** | Two-Dimensional Graphics Transformation: Basic Transformations: Translation, Rotation, Scaling; Matrix Representations and Homogeneous Coordinates; Other Transformations: Reflection, Shearing; Coordinate Transformations; Composite Transformations; Inverse Transformation; Affine Transformations; Raster Transformation; Graphical Input: Pointing and Positioning Devices and Techniques | **Questioning** | **Students will be able to analyze 2D types of transformations and Clipping Algorithm** | **Class Test** |
| **4.** | **April** | Two-Dimensional Viewing: Window and Viewport, 2-D Viewing Transformation Clipping: Point Clipping; Line Clipping: Cohen-Sutherland Line Clipping Algorithm, Mid-Point Subdivision Line Clipping Algorithm; Polygon Clipping: Sutherland-Hodgman Polygon Clipping Algorithm; Three-Dimensional Graphics: Three-Dimensional Display Methods; 3-D Transformations: Translation, Rotation, Scaling; Composite Transformations; | **Providing Practical Environment for better understanding of graphics** | **Student will able to learn about Searching 3-D graphics techniques,** | **Unit Test** |

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