

Lesson Plan BCA 6th Sem

Name of Institution: Seth Jai Parkash MukandLal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Nishi Midha(Theory & Practical)

Discipline: BCA

Semester: 6th

Subject: Web Designing Using Advanced Tools (BCA-361)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1st	What are Interactivity Tool	Teaching	1	Write a program to change background color, font style and color, font family using CSS.
	Introduction and Features of Java Script	Teaching		
	Data types, Operators, Statements of Java Script	Teaching		
	Functions, Event Handling	Teaching		
2nd	Use of Predefined Object and Methods	Teaching	2	Write a program to change the style of HTML elements using CSS selectors (element, id, class) properties.
	Frames, Windows, Tables, Images, Links	Teaching		
	Introduction and Functions of VBScript	Teaching		
	Variables, Data Types, Numeric and Literal Constants used in VB Script	Teaching/Assignment		
3rd	Arrays, Operators	Teaching	3	Write a program to use different font, styles: In the style definition you define how each selector should work (font, color etc.). Then, in the body of your pages, you refer to these selectors to activate the styles.
	Subroutine Procedures	Teaching		
	Function Procedures	Teaching		
	Control Statements	Teaching		
4th	Strings, Message and Input Boxes	Teaching	4	Write a program to create dotted, dashed, groove and ridge border using CSS border property.
	Date and Time, Event Handlers	Teaching		
	Embedding VBScript in HTML	Teaching		
	Revision	Teaching/Quiz		
5th	Active Script Pages –	Teaching	5	WAP to create table and list using CSS.

	Introduction, Features			
	Client-Server Model	Teaching		
	Data Types, Decision Making Statements	Teaching		
	Control statements , Use of Various Objects of ASP	Teaching/Assignment		
6th	Various Techniques of Connecting to Database	Teaching	6	Create a CSS Box Model.
 Do	Teaching		
	Macromedia Flash	Teaching		
	Macromedia Dreamweaver	Teaching		
7th	PHP: Basic Introduction and Features	Teaching/Quiz	7	Embedding java Script in HTML pages.
	DHTML: Introduction, Features	Teaching		
	Events, Dynamic Positioning	Teaching		
	Layer Object, Properties of STYLE	Teaching		
8th	Dynamic Styles, Inline Styles	Teaching	8	Write a program to change HTML content and attribute values using JavaScript.
	Event Handlers	Teaching		
	Cascading Style Sheets (CSS): Basic Concepts, Properties	Teaching		
	Creating Style Sheets	Teaching		
9th	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables	Teaching/Assignment	9	Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.
 Do	Teaching		
	Colors; Marquee; Mouseovers	Teaching		
	Filters and Transitions	Teaching		
10th	Adding Links; Adding Tables	Teaching	10	WAP to create popup and alert boxes in JavaScript
	Adding Forms, Adding Image and Sound	Teaching		
	Use of CSS in HTML Documents Linking	Teaching/Quiz		
	Embedding of CSS in HTML Document	Teaching		
11th	Microsoft FrontPage: Introduction, Features	Teaching	11	WAP to call a function using external JavaScript.
	Title Bar, Menu bar, FrontPage Tool Bar	Teaching/Assignment		
	Style, Font Face and Formatting Bar, Scroll Bars	Teaching		

	XML: Introduction, Features	Teaching		
12th	XML Support and Usage, Structure of XML	Teaching	12	Create any catalog using XML.
	Documents, Structures in XML	Teaching		
	Creating Document Type Declarations, Flow Objects	Teaching		
	Working with Text and Font, Color and Background Properties	Teaching/Quiz		
13th	Queries	Assessment	13	Design an XML document to store information about a student in a college. The information must include Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.
	Revision	Teaching		
	Revision	Assessment		
	Revision	Teaching		

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Gaganpreet Kaur

Discipline: BCA

Semester: 6th

Subject: Operating System-II (BCA – 362)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	Process Synchronization	Teaching
	The Critical Section Problem – Single Process/Two Process Solutions	Teaching
	Semaphores – Types, Implementation	Teaching
	Deadlocks and Starvation	Teaching
2nd	Classical Problems of Synchronization – The Bounded Buffer Problem	Teaching
	The Readers and Writers Problem	Teaching
	The Dining-Philosophers Problem	Teaching/ Assignment
	Critical Regions, Monitors	Teaching
3rd	Directory Structure: Single Level, Two Level	Teaching
	Tree Structures	Teaching
	Acyclic Graph, General Graph	Teaching
	Directory Implementation, Recovery	Teaching/ Assignment
4th	Secondary Storage Structure: Disk Structure	Teaching
	Disk Scheduling: FCFS, SSTF	Teaching
	SCAN, C-SCAN, LOOK	Teaching
	Selection of Disk Scheduling Algorithm	Assessment
5th	Disk Management	Teaching
	Swap Space Management	Teaching
	Network Operating Systems	Teaching
	Remote Login, Remote File Transfer	Teaching

6th	Distributed Operating System: Data Migration	Teaching
	Computation Migration, Process Migration	Teaching/ Assignment
	Linux: Introduction, Features	Teaching
	Architecture, Distributions, Accessing Linux System	Teaching
7th	Login/Logout/Shutting Down	Teaching
	Comparison of Linux with other Operating Systems	Teaching
	Commands in Linux: General-Purpose Commands	Teaching
	File Oriented Commands, Directory Oriented Commands	Teaching
8th	Communication Oriented Commands	Teaching/ Assignment
	Process Oriented Commands	Assessment
	Redirection of Input and Output, Pipes	Teaching
	Revision	Teaching
9th	Linux File System: Types of Files in Linux	Teaching
	File Attributes, Structure of File System	Teaching
	I Node structure	Teaching
	File Permission	Teaching
10th	File System Components	Assessment
	Standard File System	Teaching
	File System Types	Teaching
	Disk Related Commands	Teaching
11th	Processes in Linux: Introduction	Technical activity
	Job Control in Linux using at, batch, cron & time commands	Teaching/ Assignment
	The vi editor: Introduction, Modes of vi Editor	Teaching
	Command in vi Editor	Assessment
12th	Shell Programming: Introduction, Shell Variables	Teaching
	Shell Keywords, Operators	Teaching
	Assigning Values to the Variables, I/O in Shell	Teaching
	Control Structures	Teaching
13th	-----DO-----	Assessment
	Creating & Executing Shell Programs in Linux	Teaching
	Quiz	Assessment
	Revision/ Doubts	Teaching

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Rooz Munjal(Theory)

Discipline: BCA

Semester: 6th

Subject: Computer Graphics(BCA-363)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	Introduction to Computer Graphics	Teaching
	Interactive and Passive Graphics; Applications of Computer Graphics	Teaching
	Display Devices: CRT; Random Scan	Teaching
	Raster Scan, Refresh Rate and Interlacing, Bit Planes	Teaching
2nd	Color Depth, Color Palette, Color CRT Monitor	Teaching
	DVST, Flat-Panel Displays	Teaching
	Plasma Panel, LED,LCD	Teaching/ Assignment
	Lookup Table, Interactive Input Devices	Teaching
3rd	Display Processor	Assessment
	General Purpose Graphics Software	Teaching
	Coordinate Representations	Teaching
	Revision	Teaching
4th	Point-Plotting Techniques: Scan Conversion	Teaching
	Scan-Converting a Straight Line: The Symmetrical DDA	Teaching
	The Simple DDA, Bresenham's Line Algorithm	Teaching
	Scan-Converting a Circle: Circle drawing using Polar Coordinates	Teaching
5th	Bresenham's Circle Algorithm	Teaching
	Scan-Converting an Ellipse: Polynomial Method, Trigonometric Method	Teaching/ Assignment
	Polygon Area Filling: Scan-line Fill and Flood Fill Algorithms	Teaching

	Revision	Teaching
6th	Two-Dimensional Graphics Transformation: Basic Transformations: Translation, Rotation, Scaling	Teaching
	Matrix Representations and Homogeneous Coordinates	Assessment
	Other Transformations: Reflection, Shearing	Teaching
	Coordinate Transformations	Teaching
7th	Composite Transformations	Teaching
	Inverse Transformation	Teaching
	Affine Transformations	Teaching
	Raster Transformation	Assessment
8th	Graphical Input: Pointing	Teaching/Assignment
	Positioning Devices	Teaching
	Techniques	Teaching
	Revision	Teaching
9th	Two-Dimensional Viewing	Teaching
	Window and Viewport	Teaching
	2-D Viewing Transformation	Teaching
	-----do-----	Teaching
10th	Clipping: Point Clipping	Assessment
	Line Clipping	Teaching
	Cohen-Sutherland Line Clipping Algorithm	Teaching
	Mid-Point Subdivision Line Clipping Algorithm	Teaching
11th	Polygon Clipping	Teaching
	Sutherland-Hodgman Polygon Clipping Algorithm	Teaching/Assignment
	Three-Dimensional Graphics	Teaching
	Three-Dimensional Display Methods	Assessment
12th	3-D Transformations: Translation	Teaching
	Rotation	Teaching
	Scaling	Teaching
	Composite Transformations	Teaching
13th	Queries	Teaching
	Revision	Teaching/ Assessment
	Revision	Assessment
	Revision	Teaching

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engg. & Tech. Radaur

Name of the Faculty: Ms. Savedna Gupta (Theory)

Discipline: BCA

Semester: 6th

Subject: Internet Technologies (BCA- 364)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	Internet Introduction and History, Internet Services	Teaching
	TCP/IP Architecture, and its Layers	Teaching
	Protocols, TCP/IP Model vs OSI Model	Teaching
	World Wide Web Client and Server Architecture	Teaching
2nd	Creating and Searching information on the Web	Teaching
	Revision of above topics	Teaching
	Popular Search Engines URL, HTTP	Teaching
	Web Browsers, Chat and Bulletin Board,	Teaching
3rd	USENET and Network News Transfer Protocol	Teaching/Assignment
	Revision	Teaching
	Test of above topics	Test/Assignment
	Internet Vs Intranet	Teaching/Quiz
4th	TCP, UDP and IP Protocols	Teaching
	About Port Numbers and their uses	Teaching
	Format of TCP, UDP and IP	Teaching
	IPv4 Addressing, Need for IPv6	Teaching
5th	IPv6 Addressing and packet format and TCP Services	Teaching
	Revision of above topics	Teaching
	TCP Connection Management, Remote Procedure Call, IP Address Resolution, DNS	Teaching
	DNS Mapping Recursive and Iterative	Teaching

	Resolution	
6th	Mapping Internet Addresses to Physical Addresses. ARP, RARP, RARP	Teaching/ Assignment
	DHCP, ICMP,	Teaching
	IGMP	Teaching/Quiz
	Revision	Teaching
7th	Application Layer, Electronic Mail Architecture, Protocols SMTP	Teaching
	MIME, POP, IMAP	Teaching
	Web Based Mail, File Access and Transfer FTP,	Teaching
8th	Anonymous FTP, TFTP, NFS	Teaching/ Assignment
	Remote Login Using Telnet	Teaching
	Voice and Video Over IP, RTP	Teaching
	RTCP, IP Technology	Teaching
9th	IP Signaling RSVP	Teaching
	Revision	Teaching
	Class Test	Teaching/Test
	Routing in Internet: RIP	Teaching
10th	OSPF, BGP	Teaching
	Internet Multicasting	Teaching
	Mobile IP, Private Network Interconnection	Teaching/Quiz
	Network Address Translation (NAT)	Teaching
11th	Virtual Private Network (VPN)	Teaching
	Internet Management and SNMP	Teaching/ Assignment
	Internet Security Email Security, Web security, Firewall	Teaching
12th	Introduction to IPSec	Teaching
	Secure Socket Layer (SSL)	Teaching
	Revision	Teaching
	Class Test	Class Test
13th	Revision	Teaching

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Radaur

Name of the Faculty: Ms. Priyanka KAmboj (Theory and Practical)

Discipline: BCA

Semester: 6th

Subject: Advanced Programming with Visual Basic (BCA-365)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1st	Collection: Adding, Removing,	Teaching	1	1.WAP to store the city names and temperatures using collections.
	Counting, Returning Items in a Collection, Processing a Collection	Teaching		
	Working with Forms: Form Properties, Creating forms in Project	Teaching		
	Adding, Removing Forms in Project	Teaching		
2nd	Adding Multiple Forms	Teaching	2	2. WAP to show the use of Drag and Drop Operation such that: i. When button is first dragged over the picture box, the picture box is painted red. ii. When the button leaves the picture box, the picture box is painted green. iii. If the user drops the button while it's over the picture box,
	Managing Forms at Run Time	Teaching		
	Hiding & Showing Forms, Load & Unload Statements	Teaching		
	Drag and Drop Operation, Activate & Deactivate events	Teaching		

				the picture box is painted blue
3rd	Form-load event, Example using Forms	Teaching	3	3. WAP to create LoadEvent Handler
	Programs in VB using Forms	Teaching		
	Test	Assessment		
	Working with Menu: Menu Designing in VB	Teaching		
4th	Adding a Menu to a Form, Modifying and Deleting Menu Items	Teaching	4	4. WAP to add multiple forms and apply various events on them in a project i.e. Form Handling.
	Adding Access Characters, Adding Shortcut Keys	Teaching/ Quiz		
	Manipulating Menus using Common Dialog Box	Teaching		
	Attaching Code to Events	Teaching		
5th	Creating Submenus	Teaching	5	5. WAP to show the use of Menus similar to notepad with shortcut keys.
	Dynamic Menu Appearance	Teaching/ Assignment		
	Advanced Controls in VB: Scroll Bar, Slider Control	Teaching		
	Tree View, List View, Rich Text Box Control	Teaching		
6th	Toolbar, Status Bar, Progress Bar, Cool bar, Image List	Teaching	6	6. Design a form for speed control program using scroll bars.
	-----do-----	Teaching		
	Program Development in VB using Menus	Teaching		
	Program Development in VB using Advance Controls	Teaching		
7th	Test	Assessment	7	7. Design a form using shape control to display signal and change it timely using timer control
	File Handling & File Controls: Sequential & Random files	Teaching		
	Opening and Closing Data Files	Teaching		
	Viewing the Data in a File	Teaching/		
8th	Performing Operations on a File	Teaching	8	8. Design a form contain list box and two command buttons: a) add: to add the element to the list from input box b) delete: to delete the list elements
	Creating a Sequential Data File	Teaching		
	Writing Data to a Sequential File	Teaching		
	Reading the Data in a Sequential File	Teaching/ Quiz		
9th	Finding the End of a Data File		9	9. Design a form using Tab
	Locating a File			

	Reading and Writing a Random File (get, put, LOF, seek).	Teaching		control, image list, status bar, tool bar which facilitates different arithmetic operations.
	Working with Graphics: Using Paint, Line, Circle, Manipulating			
10th	Graphics Program Development in VB using Files	Teaching/Assignment	10	10. WAP to demonstrate the file system in Visual Basics.
	Graphics Program Development in VB using Graphics	Teaching		
	TEST	Assessment		
	Accessing Databases: Data Controls	Teaching		
11th	Data-Bound Controls: DAO, RDO, ADO	Teaching	11	11. Design a form to display a picture using image box/picture box selected from a file in file list box directory list box, drive list box
	-----do-----	Teaching		
	-----do-----	Teaching		
	Creating the Database, Setting Properties	Teaching		
12th	Applying Operations on Database	Teaching	12	12. WAP to draw line and shapes and perform different graphic methods.
	Viewing the Database	Teaching		
	Updating the Database (adding, deleting records)	Teaching/Quiz		
	-----do-----	Teaching		
13th	Program Development in VB using Database.	Teaching/Assignment	13	13. WAP to create a Visual Basic application for performing basic functions in a database.
	TEST	Assessment		
	Revision	Teaching		
	Revision	Teaching		

Name of Institution: Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Radaur

Name of the Faculty: Ms. Deepti Chauhan

Discipline: BCA

Semester: 6th

Subject: Programming in Core Java (BCA-366)

Lesson Plan Duration: 13 weeks (From Jan, 2023 to May, 2023)

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	Basic Principles of Object Oriented Programming	Teaching
	Introduction to Java, History and Features of Java	Teaching
	Java Virtual Machine (JVM)	Teaching
	Java's Magic Bytecode, The Java Runtime Environment	Teaching
2nd	Basic Language Elements: Lexical Tokens, Identifiers, Keywords	Teaching
	Basic Language Elements: Literals, Comments, Primitive Data types, Operators, Assignments	Teaching
	Basics of Input/output in Java, I/O Classes, Reading Console Input	Teaching
	Control Structures in Java: Decision and Loop Control Statements	Teaching
3rd	Defining Class in Java, Creating Objects of a Class, Defining Methods, Argument Passing Mechanism	Teaching/Assignment
	Using Class and Objects	Teaching
	Constructors	Teaching
	Test	Assessment
4th	Nested Class	Teaching
	Inner Class	Teaching
	Abstract Class	Teaching
	Dealing with Static Members	Teaching
5th	Defining an Array, Initializing & Accessing Array	Teaching
	Multi –Dimensional Array, Operation on Array	Teaching
	Defining String, Operation on String	Teaching
	Creating Strings using String Class	Teaching
6th	Creating Strings using StringBuffer Class	Teaching
	Polymorphism in Java: Basic Concept, Types	Teaching
	Implementation of Polymorphism in Java	Teaching
do.....	Teaching
7th	Overriding vs. Overloading	Teaching

	Benefits of Inheritance, Types of Inheritance in Java	Teaching/Assignment
	Access Attributes, Inheriting Data Members and Methods	Teaching/Quiz
	Role of Constructors in Inheritance	Teaching
8th	Use of "super"	Teaching
	Basic Concepts of Package and Interface, Organizing Classes and Interfaces in Packages, Defining Package, Adding Classes from a Package to Your Program	Teaching
	CLASSPATH Setting for Packages, Import Package, Naming Convention For Packages	Teaching
	Test	Assessment
9th	Access Protection in Packages, Standard Packages	Teaching
	Exception Handling in Java: The Idea behind Exception, Types of Exception	Teaching
	Use of try, catch, finally in Exception Handling	Teaching
	Use of throw, throws in Exception Handling	Teaching/Assignment
10th	In-built and User Defined Exceptions	Teaching
	Checked and Un-Checked Exceptions	Teaching
	Catching more than one Exception	Teaching
	Applet Basics, Applet Architecture	Teaching/Quiz
11th	Applet Life Cycle	Teaching
	Applet Tag, Parameters to Applet	Teaching
	Embedding Applets in Web page	Teaching
	Test	Assessment
12th	Creating Simple Applets	Teaching
	Designing Graphical User Interfaces in Java, Components and Containers	Teaching
	Using Containers, Layout Managers	Teaching
	AWT Components	Teaching/Quiz
13th	AWT Classes	Teaching
	AWT Controls	Teaching
	Revision	Teaching/Assignment
	Test	Assessment