

## Lesson Plan

Name of Faculty: **Tanvi Mehta**

Discipline: **BCA**

Semester: **6<sup>th</sup>**

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

Lesson Plan Duration: **15 Weeks**

Workload (Lecture) Per Week: **4 Lecture Per Week**

Week	Theory		Practical	
	Lecture Day	Topic(including assignment Test)	Practical Day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	JavaScript: Introduction, Features	1 <sup>st</sup>	Write a Javascript program to define a user defined function for sorting the values in an array
	2 <sup>nd</sup>	Data types		
	3 <sup>rd</sup>	Operators,Statements	2 <sup>nd</sup>	Create an html page to explain the use of various predefined functions in a string
	4 <sup>th</sup>	Functions, Event Handling		
2 <sup>nd</sup>	5 <sup>th</sup>	Predefined Object and Methods	3 <sup>rd</sup>	Create an html page to explain the use of various predefined functions in a array & Date object in Javascript.
	6 <sup>th</sup>	Use of Frames, Windows,		
	7 <sup>th</sup>	Use of Tables, Images, Links	4 <sup>th</sup>	Create an html page to demonstrate exception handling in javascript.
	8 <sup>th</sup>	VBScript: Introduction, Features, Variables, Data Types		
3 <sup>rd</sup>	9 <sup>th</sup>	Numeric and Literal Constants, Arrays, Operators	5 <sup>th</sup>	Write a java script to

	10 <sup>th</sup>	Subroutine Procedures, Function Procedures,		validate the various fields in a registration page
	11 <sup>th</sup>	Control Statements, Strings, Message and Input Boxes	6 <sup>th</sup>	Create a html file to open new window from the current window using javascript.
	12 <sup>th</sup>	Date and Time Functions		
4 <sup>th</sup>	13 <sup>th</sup>	Event Handlers, Embedding VBScript in HTML	7 <sup>th</sup>	To create a html page to display a new image & text when the mouse comes over the existing content in the page.
	14 <sup>th</sup>	Multiple choice Questions		
	15 <sup>th</sup>	Class Test	8 <sup>th</sup>	Class Test
	16 <sup>th</sup>	Practical Assignments <ul style="list-style-type: none"> <li>Explain the following with examples (in both VB/Java script): (a) Control Statements (b) Functions.</li> <li>How is embedding done between scripting languages and HTML? Give example.</li> </ul>		
5 <sup>th</sup>	17 <sup>th</sup>	Active Script Pages – Introduction, Features	9 <sup>th</sup>	Create a table of content using ASP program & navigate within the pages.
	18 <sup>th</sup>	Client-Server Model		
	19 <sup>th</sup>	Data Types	10 <sup>th</sup>	Create ASP program to demonstrate request object method.
	20 <sup>th</sup>	Decision Making Statements		
6 <sup>th</sup>	21 <sup>st</sup>	Use of Various Objects of ASP	11 <sup>th</sup>	Create ASP program to demonstrate response object method.
	22 <sup>nd</sup>	Various Techniques of Connecting to Database		
	23 <sup>rd</sup>	Macromedia Flash: Basic Introduction and Features	12 <sup>th</sup>	Display all the content in the database using ASP program.
	24 <sup>th</sup>	Macromedia Dreamweaver: Basic Introduction and Features		
7 <sup>th</sup>	25 <sup>th</sup>	PHP: Basic Introduction and Features	13 <sup>th</sup>	Write a PHP program to store current date-time

	26 <sup>th</sup>	Multiple choice Questions		in a COOKIE and display the "Last visited date-time on the web page upon reopening of the same page.
	27 <sup>th</sup>	Class Test	14 <sup>th</sup>	Class Test
	28 <sup>th</sup>	Practical Assignments <ul style="list-style-type: none"> <li>• What is Animation? Which tools are used to animate an object?</li> <li>• Make a website of your choice with dream weaver</li> </ul>		
8 <sup>th</sup>	29 <sup>th</sup>	DHTML: Introduction, Features	15 <sup>th</sup>	Design a web page using CSS to display different font styles
	30 <sup>th</sup>	Events, Dynamic Positioning		
	31 <sup>st</sup>	Layer Object, Properties of STYLE	16 <sup>th</sup>	Design a web page using CSS to set background image for both the page and single elements on page.
	32 <sup>nd</sup>	Dynamic Styles, Inline Styles		
9 <sup>th</sup>	33 <sup>rd</sup>	Event Handlers	17 <sup>th</sup>	Design a web page using CSS to control the repetition of image with background-repeat property
	34 <sup>th</sup>	Cascading Style Sheets (CSS): Basic Concepts, Properties		
	35 <sup>th</sup>	Creating Style Sheets	18 <sup>th</sup>	Design a web page using CSS to define style for links as a:link, a:active, a:hover, a:visited
	36 <sup>th</sup>	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors, Marquee		
10 <sup>th</sup>	37 <sup>th</sup>	Mouseovers, Filters and Transitions	19 <sup>th</sup>	Design a web page using CSS to add customized cursors for links.
	38 <sup>th</sup>	Adding Links; Adding Tables;		
	39 <sup>th</sup>	; Adding Forms; Adding Image and Sound	20 <sup>th</sup>	Design a web page using CSS to show the work with layers
	40 <sup>th</sup>	Use of CSS in HTML Documents		

11 <sup>th</sup>	41 <sup>st</sup>	Linking and Embedding of CSS in HTML Document	21 <sup>st</sup>	Design a web page using CSS to show the work with layers
	42 <sup>nd</sup>	Multiple choice Questions		
	43 <sup>rd</sup>	Class Test	22 <sup>nd</sup>	Class Test
	44 <sup>th</sup>	Assignment <ul style="list-style-type: none"> <li>• Explain color management.</li> <li>• Write a website “Haryana TOURISM” using CSS</li> </ul>		
12 <sup>th</sup>	45 <sup>th</sup>	Microsoft FrontPage: Introduction, Features	23 <sup>rd</sup>	Create a CD catalog using XML file.
	46 <sup>th</sup>	Title Bar, Menu bar, FrontPage Tool Bar		
	47 <sup>th</sup>	Style, FontFace and Formatting Bar, Scroll Bars	24 <sup>th</sup>	Create a CD catalog using XML file.
	48 <sup>th</sup>	XML: Introduction, Features		
13 <sup>th</sup>	49 <sup>th</sup>	XML Support and Usage, Structure of XML Documents	25 <sup>th</sup>	Create external style sheet and using the style sheet in xml file.
	50 <sup>th</sup>	Structures in XML		
	51 <sup>st</sup>	Creating Document Type Declarations	26 <sup>th</sup>	Create external style sheet and using the style sheet in xml file.
	52 <sup>nd</sup>	Flow Objects		
14 <sup>th</sup>	53 <sup>rd</sup>	Working with Text and Font	27 <sup>th</sup>	Class Test
	54 <sup>th</sup>	Color and Background Properties		
	55 <sup>th</sup>	Multiple choice Questions	28 <sup>th</sup>	Revision
	56 <sup>th</sup>	Class Test		
15 <sup>th</sup>	57 <sup>th</sup>	Assignment <ul style="list-style-type: none"> <li>• What are the features of front page?</li> <li>• What is the structure of XML? How can it be connected to Database?</li> </ul>	29 <sup>th</sup>	Revision
	58 <sup>th</sup>	Revision of Unit-1		
	59 <sup>th</sup>	Revision of Unit-2	30 <sup>th</sup>	Revision

	60 <sup>th</sup>	Revision of Unit-3,4		
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## Lesson Plan

Name of Faculty: **Safurti**

Discipline: **BCA**

Semester: **6<sup>th</sup>**

Subject: **Operating System-II (BCA-362)**

Lesson Plan Duration: **15 Weeks**

Workload (Lecture) Per Week: **4 Lecture Per Week**

Week	Theory	
	Lecture Day	Topic(Including Assignment /Test)
<b>1<sup>st</sup></b>	1 <sup>st</sup>	Process Synchronization: The Critical Section Problem – Single Process/Two Process Solutions
	2 <sup>nd</sup>	Semaphores – Types, Implementation
	3 <sup>rd</sup>	Deadlocks and Starvation
	4 <sup>th</sup>	Classical Problems of Synchronization – The Bounded Buffer Problem
<b>2<sup>nd</sup></b>	5 <sup>st</sup>	The Readers and Writers Problem
	6 <sup>th</sup>	The Dining- Philosophers Problem
	7 <sup>th</sup>	Critical Regions
	8 <sup>th</sup>	Monitors Directory Structure: Single Level, Two Level
<b>3<sup>rd</sup></b>	9 <sup>th</sup>	Tree Structures, Acyclic Graph
	10 <sup>th</sup>	General Graph
	11 <sup>th</sup>	Directory Implementation, Recovery
	12 <sup>th</sup>	Assignment 1: 1)Write a note on Semaphore Implementation. 2) Explain the following classical problems of synchronization : (i)Bounded buffer problem (ii)The readers and writes problems (iii)The Dining philosophers problem.

4 <sup>th</sup>	13 <sup>th</sup>	Revision of Assignment 1
	14 <sup>th</sup> 15 <sup>th</sup>	MCQs of Unit-I
	16 <sup>th</sup>	Secondary Storage Structure: Disk Structure, Disk Scheduling: FCFS, SSTF
	17 <sup>th</sup>	SCAN, C-SCAN, LOOK; Selection of Disk Scheduling Algorithm
5 <sup>th</sup>	18 <sup>th</sup>	Test of Unit-I
	19 <sup>th</sup>	Disk Management; Swap Space Management
	20 <sup>th</sup>	Network Operating Systems: Remote Login, Remote File Transfer
	21 <sup>st</sup>	Distributed Operating System: Data Migration
6 <sup>th</sup>	22 <sup>nd</sup>	Computation Migration, Process Migration
	23 <sup>rd</sup>	Assignment 2: 1) Explain the following disk scheduling algorithms by using example : (a) SSTF Scheduling (b) C-Scan Scheduling (c) Look Scheduling 2) Write short notes on the following : (a) Remote login (b) Remote file Transfer
	24 <sup>th</sup>	Revision of Assignment 2
	25 <sup>th</sup>	MCQs of Unit-II
7 <sup>th</sup>	26 <sup>th</sup>	Linux: Introduction, Features
	27 <sup>th</sup>	Architecture, Distributions
	28 <sup>th</sup>	Accessing Linux System, Login/Logout/Shutting Down
	29 <sup>th</sup>	Test of Unit-II
8 <sup>th</sup>	30 <sup>th</sup>	Comparison of Linux with other Operating Systems
	31 <sup>st</sup>	Commands in Linux: General-Purpose Commands
	32 <sup>nd</sup>	File Oriented Commands
	33 <sup>rd</sup>	Directory Oriented Commands
9 <sup>th</sup>	34 <sup>th</sup>	Communication Oriented Commands
	35 <sup>st</sup>	Process Oriented Commands
	36 <sup>th</sup>	Redirection of Input and Output

	37 <sup>th</sup>	Pipes
<b>10<sup>th</sup></b>	38 <sup>th</sup>	Assignment 3: 1)What do you mean by Linux distribution? Explain any six linux distribution. 2) Explain the following commands in Linux : (a) Ps (b) cd (c) Vdir (d) Cat
	39 <sup>th</sup>	Revision of Assignment 3
	40 <sup>th</sup>	MCQs of Unit-III
	41 <sup>st</sup>	Linux File System: Types of Files in Linux, File Attributes
<b>11<sup>th</sup></b>	42 <sup>nd</sup>	Structure of File System
	43 <sup>rd</sup>	inode, File Permission
	44 <sup>th</sup>	File System Components, Standard File System
	45 <sup>th</sup>	File System Types, Disk Related
<b>12<sup>th</sup></b>	46 <sup>th</sup>	Test of Unit-III
	47 <sup>th</sup>	Commands Processes in Linux: Introduction, Job Control in Linux using at, batch
	48 <sup>th</sup>	corn & time commands
	49 <sup>th</sup>	The vi editor: Introduction, Modes of vi Editor
<b>13<sup>th</sup></b>	50 <sup>th</sup>	Command in vi Editor
	51 <sup>st</sup>	Shell Programming: Introduction, Shell Variables
	52 <sup>nd</sup>	Shell Keywords, Operators
	53 <sup>rd</sup>	Assigning Values to the Variables, I/O in Shell
<b>14<sup>th</sup></b>	54 <sup>th</sup>	Control Structures
	55 <sup>th</sup>	Creating & Executing Shell Programs in Linux
	56 <sup>th</sup>	Assignment 4: 1) Describe the structure of file system in Linux. Also explain file system types in Linux. 2) Explain different disk related commands in Linux

	57 <sup>th</sup>	Revision of Assignment 4
<b>15<sup>th</sup></b>	58 <sup>th</sup>	MCQs of Unit-IV
	59 <sup>th</sup>	Revision of University Question paper 2015
	60 <sup>th</sup>	Test of Unit-IV

## Lesson Plan

Name of Faculty: **Neha Aggarwal**

Discipline: **BCA**

Semester: **6<sup>th</sup>**

Subject: **Internet Technologies(BCA-364)**

Lesson Plan Duration: **15 Weeks**

Workload (Lecture) Per Week: **4 Lecture Per Week**

<b>Week</b>	<b>Theory</b>	
	<b>Lecture Day</b>	<b>Topic(Including Assignment /Test)</b>
<b>1<sup>st</sup></b>	1 <sup>st</sup>	Internet: Introduction; History; Internet Services
	2 <sup>nd</sup>	TCP/IP: Architecture, Layers, Protocols
	3 <sup>rd</sup>	TCP/IP model versus OSI Model
	4 <sup>th</sup>	World Wide Web (WWW) - The Client Side, The Server Side, Creating and Searching Information on the Web
<b>2<sup>nd</sup></b>	5 <sup>st</sup>	Popular Search Engines, URL, HTTP, Web Browsers, Chat & Bulletin Board
	6 <sup>th</sup>	USENET & NNTP (Network News Transfer Protocol); Internet vs. Intranet
	7 <sup>th</sup>	<ol style="list-style-type: none"><li>1. Assignment 1: Compare TCP/IP and OSI Model</li><li>2. Explain various Search Engines.</li><li>3. Describe the architecture and layers of TCP/IP in detail.</li></ol>
	8 <sup>th</sup>	Test of Unit I
<b>3<sup>rd</sup></b>	9 <sup>th</sup>	TCP, UDP and IP Protocols,
	10 <sup>th</sup>	Port Numbers, Format of TCP, UDP and IP;
	11 <sup>th</sup>	IPv4 addressing ,The need for IPv6;
	12 <sup>th</sup>	IPv6 addressing and packet format

4 <sup>th</sup>	13 <sup>th</sup>	TCP Services; TCP Connection Management
	15 <sup>th</sup>	Remote Procedure Call
	16 <sup>th</sup>	IP Address Resolution- DNS
	17 <sup>th</sup>	Domain Name Space; DNS Mapping
5 <sup>th</sup>	18 <sup>th</sup>	Recursive and Iterative Resolution
	19 <sup>th</sup>	Mapping Internet Addresses to Physical Addresses
	20 <sup>th</sup>	ARP, RARP
	21 <sup>st</sup>	DHCP; ICMP; IGMP
6 <sup>th</sup>	18 <sup>th</sup>	Multiple Choice Questions
	19 <sup>th</sup>	Key Terms: 1. IPv4 2. Tunneling 3. IPv6 4. DNS 5. MAC address
	20 <sup>th</sup>	Class Test
	21 <sup>st</sup>	Assignment Questions 1. What do you mean by recursive and iterative resolution in mapping ? Explain. Explain the packet formats of UDP and IP protocols. 2. What do you mean by recursive and iterative resolution in mapping ? Explain. 3. Write short notes on the following : (i) ICMP (ii) DHCP (iii) ARP (iv) RARP.
7 <sup>th</sup>	22 <sup>nd</sup>	Application Layer: Electronic Mail
	23 <sup>rd</sup>	Architecture; Protocols - SMTP, MIME
	24 <sup>th</sup>	POP, IMAP
	25 <sup>th</sup>	Web Based Mail
8 <sup>th</sup>	26 <sup>th</sup>	File Access and Transfer
	27 <sup>th</sup>	FTP, Anonymous FTP
	28 <sup>th</sup>	TFTP, NFS
	29 <sup>th</sup>	Remote Login using TELNET

<b>9<sup>th</sup></b>	30 <sup>th</sup>	Voice and Video over IP
	31 <sup>st</sup>	RTP, RTCP
	32 <sup>nd</sup>	IP Telephony and Signaling
	33 <sup>rd</sup>	RSVP
<b>10<sup>th</sup></b>	34 <sup>th</sup>	Multiple Choice Questions
	35 <sup>st</sup>	Key Terms: <ol style="list-style-type: none"> <li>1. SMTP</li> <li>2. POP</li> <li>3. Echo</li> <li>4. IGMP</li> <li>5. MailBox Names</li> <li>6. Alias</li> <li>7. ICMP</li> </ol>
	36 <sup>th</sup>	Short & Long Answer Questions
	37 <sup>th</sup>	Class Test
<b>11<sup>th</sup></b>	38 <sup>th</sup>	Assignment Questions: <ol style="list-style-type: none"> <li>1. What is NFS? Explain its working in detail.</li> <li>2. Error Reporting Vs. Error Correction</li> <li>3. Explain SMTP and MIME in detail.</li> <li>4. Explain the concept of VOIP. How does it work?</li> <li>5. What are RTP and RCTP ? Explain differences in their features</li> </ol>
	39 <sup>st</sup>	Routing in Internet
	40 <sup>th</sup>	RIP, OSPF, BGP
	41 <sup>st</sup>	Internet Multicasting
<b>12<sup>th</sup></b>	42 <sup>nd</sup>	Mobile IP
	43 <sup>rd</sup>	Private Network Interconnection
	44 <sup>th</sup>	Network Address Translation (NAT)
	45 <sup>th</sup>	Virtual Private Network (VPN)
<b>13<sup>th</sup></b>	46 <sup>th</sup>	Internet Management
	47 <sup>th</sup>	SNMP
	48 <sup>th</sup>	Internet Security
	49 <sup>th</sup>	E-Mail Security; Web Security
	50 <sup>th</sup>	Firewall; Introduction to IPSec and SSL

<b>14<sup>th</sup></b>	51 <sup>st</sup>	Multiple Choice Questions
	53 <sup>rd</sup>	Key Terms: 1. Autonomous Systems 2. Slow Convergence Problem 3. Delay Metric 4. SSL Error
	54 <sup>th</sup>	Test of Unit 4
<b>15<sup>th</sup></b>	55 <sup>th</sup>	Short & Long Answer Questions
	56 <sup>th</sup>	Assignment Questions: 1. What is the difference between Unicast and multicast ? 2. What is Mobile IP ? Explain in detail. 3. Discuss various measures for Internet security. 4. What is VPN ? Discuss various types of VPNs. 5. Describe the format along with working of IPSec
	57 <sup>th</sup>	Revision of UNIT-1&2
	58 <sup>th</sup>	Revision of UNIT-3&4

## Lesson Plan

Name of Faculty: **Richa Gupta**

Discipline: **BCA**

Semester: **6<sup>th</sup> semester**

Subject: **Advanced Programming with visual basic(BCA-365)**

Lesson Plan Duration: **15 Weeks**

Workload Per Week: **4 Lecture,4 Practicals Per Week**

Week	Theory		Practical	
	Lecture Day	Topic(including assignment Test)	Practical Day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	Collections: Adding, Removing	1 <sup>st</sup>	WAP to store the city names and temperatures using collections.
	2 <sup>nd</sup>	Counting, Returning Items in a Collection, Processing a Collection	2 <sup>nd</sup>	WAP to store the city names and temperatures using collections.
	3 <sup>rd</sup>	Working with Forms: Form Properties	3 <sup>rd</sup>	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,

				<p>the picture box is painted green.</p> <p>iii. If the user drops the button while it's over the picture box, the picture box is painted blue.</p>
	4 <sup>th</sup>	Creating, Adding, Removing Forms in Project	4 <sup>th</sup>	<p>WAP to show the use of Drag and Drop Operation such that:</p> <p>i. When button is first dragged over the picture box, the picture box is painted red.</p> <p>ii. When the button leaves the picture box, the picture box is painted green.</p> <p>iii. If the user drops the button while it's over the picture box, the picture box is painted blue.</p>
2 <sup>nd</sup>	5 <sup>th</sup>	Adding Multiple Forms	5 <sup>th</sup>	<p>WAP to show the use of Drag and Drop Operation such that:</p> <p>i. When button is first dragged over the picture box, the picture box is painted red.</p> <p>ii. When the button leaves the picture box, the picture box is painted green.</p> <p>iii. If the user drops the button while it's over the picture box, the picture box is painted blue.</p>

	6 <sup>th</sup>	Managing Forms at Run Time	6 <sup>th</sup>	WAP to create Load-Event Handler
	7 <sup>th</sup>	Hiding & Showing Forms	7 <sup>th</sup>	WAP to create Load-Event Handler
	8 <sup>th</sup>	Load & Unload Statements	8 <sup>th</sup>	WAP to add multiple forms and apply various events on them in a project i.e. Form Handling.
3rd	9 <sup>th</sup>	Drag and Drop Operation	9 <sup>th</sup>	WAP to add multiple forms and apply various events on them in a project i.e. Form Handling.
	10 <sup>th</sup>	Activate & Deactivate events	10 <sup>th</sup>	WAP to build dynamic forms at run-time.
	11 <sup>th</sup>	Form-load event	11 <sup>th</sup>	WAP to build dynamic forms at run-time.
	12 <sup>th</sup>	Example using Forms	12 <sup>th</sup>	WAP to show the use of Menus similar to notepad with shortcut keys.

4th	13 <sup>th</sup>	Programs in VB using Forms	13 <sup>th</sup>	WAP to show the use of Menus similar to notepad with shortcut keys.
	14 <sup>th</sup>	MCQs	14 <sup>th</sup>	WAP to manipulate menus at run-time.
	15 <sup>th</sup>	Class test	15 <sup>th</sup>	WAP to manipulate menus at run-time.
	16 <sup>th</sup>	Working with Menu: Menu Designing in VB	16 <sup>th</sup>	WAP to create Pop-up menus.
5 <sup>th</sup>	17 <sup>th</sup>	Adding a Menu to a Form	17 <sup>th</sup>	WAP to create Pop-up menus.
	18 <sup>th</sup>	Modifying and Deleting Menu Items	18 <sup>th</sup>	WAP to make proper use of Slider Control.
	19 <sup>th</sup>	Adding Access Characters	19 <sup>th</sup>	Design a form for speed control program using scroll bars.
	20 <sup>th</sup>	Adding Shortcut Keys	20 <sup>th</sup>	Design a form for speed control program using scroll bars.

6 <sup>th</sup>	21 <sup>st</sup>	Manipulating Menus using Common Dialog Box	21 <sup>th</sup>	Practice test
	22 <sup>nd</sup>	Attaching Code to Events	22 <sup>nd</sup>	Design a form "at run stage" the title of form1 will be change to "visual basic" and the back color of form1 will change too.
	23 <sup>rd</sup>	Creating Submenus	23 <sup>rd</sup>	Design a form "at run stage" the title of form1 will be change to "visual basic" and the back color of form1 will change too.
	24 <sup>th</sup>	Dynamic Menu Appearance	24 <sup>th</sup>	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
7 <sup>th</sup>	25 <sup>th</sup>	Advanced Controls in VB: Scroll Bar	25 <sup>th</sup>	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
	26 <sup>th</sup>	Slider Control, Tree View	26 <sup>th</sup>	WAP for displaying Traffic light signal using Timer control WAP for displaying Traffic light signal using Timer control
	27 <sup>th</sup>	List View, Rich Text Box Control	27 <sup>th</sup>	Design a form contains shape and command buttons "what is this" such that when click on the command button the name of this shape appears in message

				box.
	28 <sup>th</sup>	Toolbar, Status Bar	28 <sup>th</sup>	Design a form contains shape and command buttons "what is this" such that when click on the command button the name of this shape appears in message box.
8 <sup>th</sup>	29 <sup>th</sup>	Progress Bar, Cool bar, Image List	29 <sup>th</sup>	WAP for Storing and displaying 10 numbers in an array
	30 <sup>th</sup>	Program Development in VB using Menus and Advance Controls	30 <sup>th</sup>	WAP for Storing and displaying 10 numbers in an array
	31 <sup>st</sup>	MCQs	31 <sup>st</sup>	WAP to design a Calculator with proper functions
	32 <sup>nd</sup>	Class test	32 <sup>nd</sup>	WAP to make proper use of Tree View.
9 <sup>th</sup>	33 <sup>rd</sup>	File Handling & File Controls: Sequential & Random files	33 <sup>rd</sup>	WAP to make proper use of Tree View.
	34 <sup>th</sup>	Opening and Closing Data Files	34 <sup>th</sup>	WAP to make proper use of List View.
	35 <sup>th</sup>	Viewing the Data in a File	35 <sup>th</sup>	WAP to make proper use of List View.
	36 <sup>th</sup>	Performing Operations on a File	36 <sup>th</sup>	WAP to make proper use of Rich Text Box Control.
10 <sup>th</sup>	37 <sup>th</sup>	Creating a Sequential Data File	37 <sup>th</sup>	WAP to make proper use of Rich Text Box Control.
	38 <sup>th</sup>	Writing Data to a Sequential File	38 <sup>th</sup>	WAP to make proper use of controls like

				Progress Bar, Cool bar.
	39 <sup>th</sup>	Reading the Data in a Sequential File	39 <sup>th</sup>	WAP to make proper use of controls like Progress Bar, Cool bar.
	40 <sup>th</sup>	Finding the End of a Data File	40 <sup>th</sup>	WAP to make proper use of controls like Progress Bar, Cool bar.
11 <sup>th</sup>	41 <sup>st</sup>	Locating a File	41 <sup>st</sup>	Design a form using Tab control, image list, status bar, tool bar which facilitates different arithmetic operations.
	42 <sup>nd</sup>	Reading and Writing a Random File (get, put, LOF, seek).	42 <sup>nd</sup>	Design a form using Tab control, image list, status bar, tool bar which facilitates different arithmetic operations.
	43 <sup>rd</sup>	Working with Graphics: Using Paint, Line, Circle, Manipulating Graphics	43 <sup>rd</sup>	Design a form using Tab control, image list, status bar, tool bar which facilitates different arithmetic operations.
	44 <sup>th</sup>	Program Development in VB using Files and Graphics	44 <sup>th</sup>	WAP to demonstrate the file system in Visual Basics.
12 <sup>th</sup>	45 <sup>th</sup>	MCQs	45 <sup>th</sup>	WAP to demonstrate the file system in Visual Basics.
	46 <sup>th</sup>	CLASS TEST	46 <sup>th</sup>	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.

	47 <sup>th</sup>	Accessing Databases: Data Controls	47 <sup>th</sup>	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.
	48 <sup>th</sup>	Data-Bound Controls, DAO, RDO, ADO	48 <sup>th</sup>	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.
13 <sup>th</sup>	49 <sup>th</sup>	Data-Bound Controls, DAO, RDO, ADO	49 <sup>th</sup>	WAP to draw line and shapes and perform different graphic methods.
	50 <sup>th</sup>	Data-Bound Controls, DAO, RDO, ADO	50 <sup>th</sup>	WAP to draw line and shapes and perform different graphic methods.
	51 <sup>st</sup>	Creating the Database	51 <sup>st</sup>	WAP to implement a Visual Basic program to create a free hand drawing.
	52 <sup>nd</sup>	Setting Properties, Applying Operations on Database	52 <sup>nd</sup>	WAP to implement a Visual Basic program to create a free hand drawing.
14 <sup>th</sup>	53 <sup>rd</sup>	Viewing the Database	53 <sup>rd</sup>	WAP to create a Visual Basic application for performing basic functions in a database.
	54 <sup>th</sup>	Updating the Database (adding, deleting records)	54 <sup>th</sup>	WAP to create a Visual Basic application for performing basic functions in a database.

	55 <sup>th</sup>	Program Development in VB using Database and Advance Controls	55 <sup>th</sup>	WAP to implement a Visual Basic program to create a database using data control and implement it in an application.
	56 <sup>th</sup>	MCQ	56 <sup>th</sup>	WAP to implement a Visual Basic program to create a database using data control and implement it in an application.
15 <sup>th</sup>	57 <sup>th</sup>	Revision of UNIT 1	57 <sup>th</sup>	WAP to implement a Visual Basic program to create a database using data control and implement it in an application.
	58 <sup>th</sup>	Revision of UNIT 2	58 <sup>th</sup>	WAP to find a record in the existing database
	59 <sup>th</sup>	Revision of UNIT 3	59 <sup>th</sup>	WAP to find a record in the existing database
	60 <sup>th</sup>	Revision of UNIT 4	60 <sup>th</sup>	Practice test

## Lesson Plan

Name of Faculty: **Sana Bharti**

Discipline: **BCA**

Semester: **6<sup>th</sup>**

Subject: **Programming in Core Java (BCA-366)**

Lesson Plan Duration: **15 Weeks**

Workload (Lecture) Per Week: **4 Lectures Per Week**

Week	Theory	
	Lecture Day	Topic(Including Assignment /Test)
1 <sup>st</sup>	1 <sup>st</sup>	Basic Principles of Object Oriented Programming
	2 <sup>nd</sup>	Introduction to Java, History
	3 <sup>rd</sup>	Features of Java
	4 <sup>th</sup>	Java Virtual Machine (JVM), Java's Magic Bytecode; The Java Runtime Environment
2 <sup>nd</sup>	5 <sup>th</sup>	Basic Language Elements: Lexical Tokens, Identifiers, Keywords, Literals, Comments
	6 <sup>th</sup>	Basic Language Elements: Primitive Data types, Operators, Assignments;
	7 <sup>th</sup>	Input/output in Java: Basics, I/O Classes, Reading Console Input
	8 <sup>th</sup>	Basic Programs ,Control Structures in Java: Decision Statements
3 <sup>rd</sup>	9 <sup>th</sup>	Control Structures in Java: Loop Control Statements
	10 <sup>th</sup>	Basic Programs using loops and decision statements
	11 <sup>th</sup>	Assignment 1 1) What are the features of Java? 2) What is difference between JRE and JDK 3) Write a program in Java to add 1 to 10 nos using for,while and do while loop
	12 <sup>th</sup>	Revision of Unit 1

4 <sup>th</sup>	13 <sup>th</sup>	Test of Unit 1
	14 <sup>th</sup>	Class and Object in Java: Defining Class in Java, Creating Objects of a Class
	15 <sup>th</sup>	Defining Methods, Argument Passing Mechanism, Using Class and Objects
	16 <sup>th</sup>	Constructors, Nested Class
5 <sup>th</sup>	17 <sup>th</sup>	Inner Class, Abstract Class
	18 <sup>th</sup>	Abstract Class Dealing with Static Members
	19 <sup>th</sup>	Array: Defining an Array, Initializing & Accessing Array
	20 <sup>th</sup>	Multi –Dimensional Array ,Strings: Defining String, Operation on Array
6 <sup>th</sup>	21 <sup>st</sup>	String, Creating Strings using String Class, Creating Strings using String Buffer Class
	22 <sup>nd</sup>	Polymorphism in Java: Basic Concept, Types,
	23 <sup>rd</sup>	Overriding vs. Overloading, Implementation
	24 <sup>th</sup>	Overriding vs. Overloading, Implementation
7 <sup>th</sup>	25 <sup>th</sup>	Assignment 2: 1) Write a program in Java to display marks of students in 10 subjects using arrays 2) Explain different operation in Strings 3) Write a program in Java to show difference between overloading and overriding
	26 <sup>th</sup>	Test of Unit 2
	27 <sup>th</sup>	Extending Classes and Inheritance in Java: Benefits of Inheritance, Types of Inheritance in Java
	28 <sup>th</sup>	Access Attributes, Inheriting Data Members and Methods
8 <sup>th</sup>	29 <sup>th</sup>	Role of Constructors in Inheritance
	30 <sup>th</sup>	Use of “super”; Packages , Defining Package
	31 <sup>st</sup>	Interfaces: Basic Concepts of Interface , Organizing Classes and Interfaces in Packages
	32 <sup>nd</sup>	Organizing Classes and Interfaces in Packages

<b>9<sup>th</sup></b>	33 <sup>rd</sup>	Adding Classes from a Package to Your Program, CLASSPATH Setting for Packages
	34 <sup>th</sup>	Import Package, Naming Convention For Packages , Access Protection in Packages,
	35 <sup>th</sup>	Standard Packages
	36 <sup>th</sup>	Discuss Key terms: Packages, Constructors, Interface ,
<b>10<sup>th</sup></b>	37 <sup>th</sup>	Assignment 3: <ol style="list-style-type: none"> <li>1) What is inheritance and write a program in Java to show inheritance</li> <li>2) Why multiple inheritance is not possible and what is effect way to implement it?</li> <li>3) What is the use of super keyword and its usage</li> <li>4) What is role of constructors explain with the help of program</li> </ol>
	38 <sup>th</sup>	Revision of Unit 3
	39 <sup>th</sup>	Test of Unit 3
	40 <sup>th</sup>	Technical Programming Quiz
<b>11<sup>th</sup></b>	41 <sup>st</sup>	Exception Handling in Java: The Idea behind Exception,
	42 <sup>nd</sup>	Types of Exception, Use of try, catch, finally in Exception Handling
	43 <sup>th</sup>	throw, throws in Exception Handling
	44 <sup>th</sup>	In-built and User Defined Exceptions
<b>12<sup>th</sup></b>	45 <sup>th</sup>	Checked and Un-Checked Exceptions, Catching more than one Exception
	46 <sup>th</sup>	Applet in Java: Applet Basics, Applet Architecture
	47 <sup>th</sup>	Applet Life Cycle, Applet Tag, Parameters to Applet
	48 <sup>th</sup>	Embedding Applets in Web page
<b>13<sup>th</sup></b>	49 <sup>th</sup>	Embedding Applets in Web page
	50 <sup>th</sup>	Creating Simple Applets;
	51 <sup>st</sup>	Creating Simple Applets;
	52 <sup>nd</sup>	GUI Programming: Designing Graphical User Interfaces in Java
<b>14<sup>th</sup></b>	53 <sup>rd</sup>	GUI Programming: Designing Graphical User Interfaces in Java

	54 <sup>th</sup>	AWT Components Using Containers
	55 <sup>th</sup>	AWT Components Using Containers
	56 <sup>th</sup>	Layout Managers
<b>15<sup>th</sup></b>	57 <sup>th</sup>	AWT Components
	58 <sup>th</sup>	AWT Classes,
	59 <sup>th</sup>	AWT Controls
	60 <sup>th</sup>	AWT Controls  Assignment4: 1) What is applet and explain its life cycle 2) Write a program in Java to draw button and textbox using AWT Container