

# Training Syllabus (Java)

Lecture wise

## Foundation of 'C'

L.N.	Contents	Hours
1	1) Introduction of programming 2) Translator 3) Introduction of 'C' 4) History of 'C' 5) C tokens <ul style="list-style-type: none"> <li>a. Keywords</li> <li>b. Identifiers</li> <li>c. Variables/Constant</li> <li>d. Data types</li> <li>e. Operators</li> <li>f. Function</li> <li>g. Header Files</li> </ul>	2
2	1) Decision making statements <ul style="list-style-type: none"> <li>a. If               <ul style="list-style-type: none"> <li>i. Simple if</li> <li>ii. Else if</li> <li>iii. Nested if</li> <li>iv. Else if ladder</li> </ul> </li> <li>b. Switch case</li> <li>c. Goto</li> </ul> 2) Looping statements / Iterative statements <ul style="list-style-type: none"> <li>a. While loop</li> <li>b. For loop</li> <li>c. Do while loop</li> </ul>	2
3	1) Array <ul style="list-style-type: none"> <li>a. Single Dimensional Arrays</li> <li>b. Double Dimensional Arrays</li> </ul> 2) String <ul style="list-style-type: none"> <li>a. String Handling</li> <li>b. String Function</li> </ul>	2

4	<p><b>1) Function</b></p> <ul style="list-style-type: none"> <li>a. Built in/Library Functions</li> <li>b. User Define Functions           <ul style="list-style-type: none"> <li>i. Declaring a function</li> <li>ii. Defining a function               <ul style="list-style-type: none"> <li>1. No Return, No Parameter</li> <li>2. Return, No Parameter</li> <li>3. No Return, Parameter</li> <li>4. Return, Parameter</li> </ul> </li> <li>iii. Calling a function</li> </ul> </li> </ul>	2
5	<p>1) Recursion          2) Type Casting          3) Scope of variable           <ul style="list-style-type: none"> <li>a. Local variable</li> <li>b. Global variable</li> </ul>         4) Storage Classes           <ul style="list-style-type: none"> <li>a. Automatic</li> <li>b. Register</li> <li>c. Static</li> <li>d. External</li> </ul> </p>	2
6	<p>1) Preprocessors           <ul style="list-style-type: none"> <li>a. File inclusion (#include)</li> <li>b. Macro Expansion (#define)</li> </ul>         2) Header files           <ul style="list-style-type: none"> <li>a. Built in/Library header Files</li> <li>b. User Define header file               <ul style="list-style-type: none"> <li>i. Creating user define header file</li> <li>ii. Using user define header file</li> </ul> </li> </ul> </p>	2
7	<p>1) Problem Solving &amp; Recovery Session          2) Test</p>	2

## Foundation of 'HTML & CSS'

<b>L.N.</b>	<b>Content</b>	<b>Hours</b>
8	<p>1) Introduction of Web pages          2) Introduction of Websites          3) Introduction of Web Browsers          4) Introduction of HTML           <ul style="list-style-type: none"> <li>a. What is Hypertext?</li> <li>b. What is Markup language</li> </ul> </p>	2

	<p>5) History of HTML      6) How to use HTML to create web pages?      7) What is tag?      8) What is element?      9) HTML tag      10) Head tag</p> <ul style="list-style-type: none"> <li>a. Title tag</li> <li>b. Style tag</li> <li>c. Script tag</li> <li>d. Noscript tag</li> <li>e. Link tag</li> <li>f. Meta tag</li> <li>g. Base tag</li> </ul> <p>11) Body tag      12) Attributes</p>	
9	<p>1) Text Editing tags</p> <ul style="list-style-type: none"> <li>a. H1, h2, h3, h4, h5, h6, p, pre, center, br, hr, b, strong, i, em, u, ins, s, strike, del, sup, sub, big, small</li> </ul> <p>2) Lists</p> <ul style="list-style-type: none"> <li>a. Ordered List (ol, li)</li> <li>b. Unordered list (ul, li)</li> <li>c. Definition list (dl, dt, dd)</li> </ul> <p>3) Table (table, tr, th, td, thead, tbody, tfoot)      4) Marquee (marquee)      5) Image (img)      6) Hyperlink (a)</p>	2
10	<p>1) Form</p> <ul style="list-style-type: none"> <li>a. input (type=text, number, date, email, password, url, range, button, submit, reset, radio, checkbox)</li> <li>b. textarea</li> <li>c. label</li> <li>d. fieldset</li> <li>e. legend</li> <li>f. select</li> <li>g. option</li> <li>h. optgroup</li> <li>i. button</li> <li>j. datalist</li> </ul>	2
11	<p>1) div      2) span      3) iframe      4) video      5) audio      6) Introduction of CSS</p>	2

	<p>7) Selectors      8) Properties &amp; values      9) Text Styling Properties</p> <ul style="list-style-type: none"> <li>a. Font-family</li> <li>b. Font-size</li> <li>c. Font-weight</li> <li>d. Text-decoration</li> <li>e. Text-transform</li> <li>f. Color</li> <li>g. Line-height</li> <li>h. Word-spacing</li> <li>i. Text-shadow</li> <li>j. Text-align</li> </ul>	
12	<p>1) Box Modal Properties</p> <ul style="list-style-type: none"> <li>a. Width</li> <li>b. Height</li> <li>c. Padding</li> <li>d. Margin</li> <li>e. Border</li> <li>f. Box-shadow</li> <li>g. Border-radius</li> <li>h. Float</li> <li>i. Outline</li> </ul> <p>2) Background</p> <ul style="list-style-type: none"> <li>a. Background-color</li> <li>b. Background-image</li> <li>c. Background-repeat</li> <li>d. Background-size</li> <li>e. Background-position</li> <li>f. Background-attachment</li> <li>g. Background (rbga)</li> </ul> <p>3) List (list-style-type, list-style-image)</p> <p>4) Table (border, border-collapse)</p>	2
13	<p>1) Position</p> <p>2) Z-index</p> <p>3) opacity</p> <p>4) Pseudo-classes</p> <ul style="list-style-type: none"> <li>a. Hover</li> <li>b. Focus</li> <li>c. Active</li> <li>d. Visited</li> <li>e. Link</li> <li>f. Disabled</li> <li>g. Enabled</li> </ul>	2

	<ul style="list-style-type: none"> <li>h. First-child</li> <li>i. Last-child</li> <li>j. Nth-child (odd,even,2n+1,1)</li> </ul> <p>5) Designing a simple menu 6) Designing a menu have sub menu</p>	
14	<p>1) Designing a simple home page of a website 2) Designing a Registration page of a website 3) Designing a login page of a website</p>	2
15	<p>1) Problem Solving &amp; Recovery Class 2) Test</p>	2

## Foundation of 'JavaScript'

L.N.	Content	Hours
16	<p>1) Introduction of Scripting language 2) Difference between Client &amp; Server Side Scripting 3) Introduction of JavaScript 4) JavaScript Tokens           <ul style="list-style-type: none"> <li>a. Keywords</li> <li>b. Identifiers</li> <li>c. Variables</li> <li>d. Data types</li> <li>e. Operators</li> <li>f. Variable declaration</li> </ul> <p>5) Document object Modal 6) Write &amp; writeln &amp; message (alert) box 7) Events 8) DOM traversing</p> </p>	2
17	<p>1) Conditional Statements (if, else if, nested if, else if ladder) 2) Looping Statements (while, for, do while) 3) Arrays 4) Objects 5) Functions 6) Call function on events</p>	2
18	<p>1) Dialog boxes           <ul style="list-style-type: none"> <li>a. Alert Box</li> <li>b. Confirm Box</li> <li>c. Prompt Box</li> </ul> <p>2) String Functions 3) Number Functions</p> </p>	2

	4) Math's Functions 5) Date Functions	
19	1) Creating a Simple Slider 2) Form validation using JavaScript (using regular expression)	2
20	1) Problem Solving & Recovery Class 2) Test	

## Foundation of 'Database'

L.N.	Content	Hours
21	1) Introduction of database 2) Introduction of DBMS / RDBMS 3) Introduction of SQL (Structured Query Language) 4) Introduction of DDL commands 5) Introduction of DML commands 6) Introduction of DCL commands	2
22	1) Create Command <ul style="list-style-type: none"> <li>a. Create Database</li> <li>b. Create table</li> </ul> 2) Drop Command <ul style="list-style-type: none"> <li>a. Drop database</li> <li>b. Drop table</li> </ul> 3) Truncate Command <ul style="list-style-type: none"> <li>a. Truncate table</li> </ul> 4) Alter Command <ul style="list-style-type: none"> <li>a. Modify table column</li> <li>b. Drop Table column</li> <li>c. Add new column into table</li> </ul> 5) Insert Command <ul style="list-style-type: none"> <li>a. Insert single record into table</li> <li>b. Insert multiple records into table</li> </ul>	2
23	1) Select Command <ul style="list-style-type: none"> <li>a. Select all columns from table</li> <li>b. Select specific columns from table</li> <li>c. Select using where clause</li> </ul> 2) Update Command <ul style="list-style-type: none"> <li>a. Update all records of table</li> </ul>	2

	<ul style="list-style-type: none"> <li>b. Update single record of table using where clause</li> </ul> <p>3) Delete Command</p> <ul style="list-style-type: none"> <li>a. Delete all records from table</li> <li>b. Delete single multiple records from table using where clause</li> </ul> <p>4) Keys</p> <ul style="list-style-type: none"> <li>a. Unique Key</li> <li>b. Primary Key</li> <li>c. Foreign key</li> </ul> <p>5) Not Null</p> <p>6) Default</p> <p>7) Auto Increment</p>	
24	<p>1) AND &amp; OR Operators</p> <p>2) Order By (Ascending or Descending Orders)</p> <p>3) Top or Limit</p> <p>4) Like</p> <p>5) Distinct</p> <p>6) Between</p> <p>7) Joins</p> <ul style="list-style-type: none"> <li>a. Inner join</li> <li>b. Left Join</li> <li>c. Right Join</li> <li>d. Full Join</li> </ul>	2
25	<p>1) SQL Aggregate Functions</p> <ul style="list-style-type: none"> <li>a. Avg()</li> <li>b. Count()</li> <li>c. Min()</li> <li>d. Max()</li> <li>e. Sum()</li> <li>f. Now()</li> </ul> <p>2) Problem Solving &amp; Recovery Class</p> <p>3) Test</p>	2

## Foundation of 'Core Java'

L.N.	Content	Hours

	<ul style="list-style-type: none"> <li>1) Introduction of Java</li> <li>2) History of Java</li> <li>3) Introduction of JVM</li> <li>4) Environment Setup for Java in Windows OS</li> <li>5) Basic Syntax of Java Programming Language</li> <li>6) Run First Java Program</li> <li>7) Java Tokens           <ul style="list-style-type: none"> <li>a. Keywords</li> <li>b. Identifiers</li> <li>c. Variables</li> <li>d. Data types</li> <li>e. Operators</li> </ul> </li> <li>8) Introduction of OOPs</li> <li>9) Basic Concept of OPPs with its Properties</li> <li>10) Java Input/Outputs</li> </ul>	
26	<ul style="list-style-type: none"> <li>1) Decision Making Statements           <ul style="list-style-type: none"> <li>a. If Statement</li> <li>b. If...Else Statement</li> <li>c. If...Else...If...Else Statement</li> <li>d. Nested if Else Statement</li> <li>e. Switch Statement</li> <li>f. Ternary Operator (Condition?True:False)</li> </ul> </li> <li>2) Looping Statement           <ul style="list-style-type: none"> <li>a. While Loop</li> <li>b. For Loop</li> <li>c. Do While Loop</li> <li>d. Break Statement</li> <li>e. Continue Statement</li> </ul> </li> <li>3) Type Conversion</li> </ul>	2
27	<ul style="list-style-type: none"> <li>1) Arrays           <ul style="list-style-type: none"> <li>a. Single Dimensional Array</li> <li>b. Double Dimensional Array</li> </ul> </li> <li>2) For each loop</li> <li>3) String</li> <li>4) Object</li> <li>5) Classes</li> <li>6) Constructor</li> <li>7) Member Variables</li> <li>8) Member Functions</li> <li>9) Create Instance/Object of Class</li> <li>10) User Class Members</li> </ul>	2
28		

29	<p>1) Modifiers</p> <ul style="list-style-type: none"> <li>a. Access Modifiers           <ul style="list-style-type: none"> <li>i. Public</li> <li>ii. Private</li> <li>iii. Protected</li> </ul> </li> <li>b. Static</li> <li>c. Final</li> <li>d. Abstract</li> </ul> <p>2) This Keywords</p> <p>3) Polymorphism</p> <ul style="list-style-type: none"> <li>a. Method Overloading</li> <li>b. Method Overriding</li> </ul>	2
30	<p>1) Inheritance</p> <ul style="list-style-type: none"> <li>a. Type of Inheritance           <ul style="list-style-type: none"> <li>i. Single Inheritance</li> <li>ii. Multilevel Inheritance</li> <li>iii. Hierarchical Inheritance</li> <li>iv. Multiple Inheritance</li> <li>v. Hybrid Inheritance</li> </ul> </li> <li>b. Extend keyword</li> </ul>	2

## Foundation of 'JSP'

L.N.	Content	Hours
31	<p>1) Introduction of Java Server Pages</p> <p>2) Introduction of Server Side Scripting language</p> <p>3) Overview of JSP</p> <p>4) Installation of JSP</p> <p>5) Syntax</p> <p>6) Input/ Output</p> <p>7) Data types</p> <p>8) Variables</p> <p>9) Constant</p>	2

32	<p>1) Decision Making Statements</p> <ul style="list-style-type: none"> <li>a. If else statement</li> <li>b. Else if statement</li> <li>c. Switch case statement</li> </ul> <p>2) Looping Statement</p> <ul style="list-style-type: none"> <li>a. While loop</li> <li>b. Do-while loop</li> <li>c. For loop</li> <li>d. Foreach loop</li> </ul>	2
33	<ol style="list-style-type: none"> <li>1. Form Handling</li> <li>2. Form Requesting</li> <li>3. Form Data Collection</li> <li>4. Post and Get Method</li> <li>5. JSP Directives</li> <li>6. Collecting Data from Text Box</li> <li>7. Collecting Data from Dropdown List</li> <li>8. Collecting Data from Check Box</li> <li>9. Collecting Data from Radio Button</li> </ol>	2
34	<ol style="list-style-type: none"> <li>1) Database Connectivity</li> <li>2) JDBC</li> <li>3) JDBC Driver Class</li> <li>4) SQL Connection</li> <li>5) SQL Statement</li> <li>6) Database Insert Operation</li> <li>7) Database Update Operation</li> <li>8) Database Delete Operation</li> </ol>	2
35	<ol style="list-style-type: none"> <li>1) File Uploading with validation</li> <li>2) Database Select Operation</li> <li>3) Data Edit and Update</li> </ol>	2
36	<ol style="list-style-type: none"> <li>1) User Registration</li> <li>2) Save user registration data into MySql database</li> <li>3) Show registered users data</li> <li>4) Delete registered users</li> <li>5) Edit registered users</li> </ol>	2
37	<ol style="list-style-type: none"> <li>1) Include Directive</li> <li>2) User Login</li> <li>3) Cookies</li> <li>4) Sessions</li> </ol>	2

38	1) Date & Time 2) JSP AJAX 3) Server Side Form Validation 4) User Authentication (Login and Logout)	2
39	1) Problem Solving & Recovery Class 2) Test 3) Project Allotment 4) Divide Team & Project Coordinators	2
40-44	Project Development (Complete All Project Modules)	2
45	Project Testing & Submission	2
46	JQuery	2
47	AJAX	2
48	Email API	2
49	SMS API	2
50	Live Chatting	2
51	Website Hosting and Publishing	2