

S. No	Topics	Day
1	Introduction to Java	Day 1 to Day 8
2	Java Virtual Machine(JVM) Basics	
3	First Java Program	
4	Variables in Java	
5	Java Data Types	
6	Java Operators	
7	If-else in Java	
8	Switch-Case in Java	
9	Java For loop	
10	Java While loop	
11	do-while loop in Java	
12	Java Continue statement	
13	Java Break statement	
14	Java OOPs	
15	Constructor in Java	
16	Static keyword in Java	
17	Java Inheritance with example	
18	Types of inheritance in Java	
19	Aggregation in Java	
20	Association in Java	
21	Super Keyword in Java	
22	Method overloading in Java	
23	Method overriding in Java	
24	Java – Method Overloading vs Method Overriding	
25	Polymorphism in Java	
26	Types of polymorphism in Java	
27	Static and dynamic binding	
28	Abstract class in Java	
29	Abstract method with example	

30	Interface in Java	
31	Java – Abstract class vs interface	
32	Java Encapsulation with example	
33	Java Packages with examples	
34	Access modifiers in Java	
35	Garbage Collection in Java	
36	final keyword	
37	Java Library	
38	Object Class	
39	String Handling Classes	
40	Java IO - File IO and console IO	
41	Local Date Time API	
42	Arrays - Primitive and Object Arrays	
43	Java Exception Handling	
44	Exception handling mechanism	
45	Java try-catch block	
46	Java finally block	
47	How to throw exception in Java	
48	Custom Exception in Java	
49	Exception Examples	
50	Java Collections	
51	Java ArrayList	
52	Java LinkedList	
53	Vector in Java	
54	HashMap in Java	
55	Java TreeMap	
56	Java LinkedHashMap	

57	Java HashSet	
58	TreeSet in Java	
59	LinkedHashSet	
60	Hashtable in Java	
61	Queue	
62	PriorityQueue	
63	Deque & ArrayDeque	
64	Comparable Interface	
65	Comparator Interface	
66	Multithreading in Java	
67	Serializtion in java	
68	Java Lambda Expressions	
69	Java Method References	
70	Java Functional Interfaces	
71	Java Stream	
72	Java Stream Filter	
73	Java Interface changes	
74	Java forEach	
75	Java Stream Collectors class	
76	. Java StringJoiner class	
77	Java Optional class	
78	Java Arrays Parallel Sort	
	RDBMS	
1	MySQL Overview	Day 9 to Day 11
2	Basics of Relational Databases	
3	Entities and Relationships	
4	SQL Language and MySQL	
5	SQL DDL AND DML	
6	MySQL Client/Server Model	
7	MySQL Connectors	

8	Database Modeling	
9	Keys and Normalization	
10	Database Design	
11	Viewing and Evaluating a Database	
12	Data Types and Database Design	
13	Numeric and String Data Types	
14	Creating a Database	
15	Creating a Table	
16	Showing How a Table Was Created	
17	Table Options	
18	Column Options	
19	Indexes, Keys, and Constraints	
20	Deleting database and tables	
21	Creating New Table Using an Existing Table	
22	Creating a Temporary Table	
23	Copying an Existing Table Structure	
24	Adding, removing and modifying table columns and indexes	
25	The SELECT Statement	
26	Creating Views	
27	Querying Data from an Application	
28	Manipulating Data and inserting records	
29	Replacing and updating existing records	
30	Deleting records	
31	Exporting and importing a script	
32	Modifying Data from an Application	
33	Querying Multiple Tables	
34	Joining Tables with SELECT	
35	Inner Joins	
36	Outer Joins	
37	Table Name Aliases	

38	Functions in MySQL Expressions	
39	Using Functions	
40	String Functions	
41	Date and time functions	
42	Numeric Functions	
43	Aggregate Functions	
44	Spaces in Function Names	
45	Understanding Backups & Backup Techniques	
46	Creating a Backup Strategy	
47	MySQL Backup Tools	
48	Raw Backup Methods	
1	Interfaces of JDBC API	Day 12
2	Driver interface	
3	Connection interface	
4	Statement interface	
5	PreparedStatement interface	
6	CallableStatement interface	
7	ResultSet interface	
8	ResultSetMetaData interface	
9	DatabaseMetaData interface	
10	RowSet interface	
11	Classes of JDBC API	
12	A list of popular classes of JDBC API is given below:	
13	CRUD Operation	
1	SDLC	Day 13 to Day 14
2	Software Development Life Cycle	
3	Models	
4	Waterfall Model	

5	Agile Model	
6	Big Bang Model	
7	Fish Model	
8	Hybrid Model	
9	Incremental Model	
10	Iterative Model	
11	JAD Model	
12	Prototype Model	
13	RAD Model	
14	Spiral Model	
15	V Model	
	SMALL PROJECT WHICH INCLUDES WHATEVER WE HAVE LEARNED SO FAR	
1	Software Testing - Overview	Day 15 to Day 16
2	Software Testing - Myths	
3	Software Testing - QA, QC & Testing	
4	Software Testing - ISO Standards	
5	Software Testing - Types of Testing	
6	JUnit - Overview	
7	JUnit - Environment Setup	
8	JUnit - Test Framework	
9	JUnit - Basic Usage	
10	JUnit - API	
11	JUnit - Writing a Tests	
12	JUnit - Using Assertion	
13	JUnit - Execution Procedure	
14	JUnit - Executing Tests	
15	JUnit - Suite Test	

16	JUnit - Ignore Test	
17	JUnit - Time Test	
18	JUnit - Exceptions Test	
19	JUnit - Parameterized Test	
20	JUnit - Plug with Ant	
21	JUnit - Plug with Eclipse	
22	JUnit - Extensions	
1	SPRING CONTENTS	Day 17 to Day 18
2	Spring - Overview	
3	Spring - Architecture	
4	Spring - Hello World Example	
5	Spring - IoC Containers	
6	Spring - Bean Definition	
7	Spring - Dependency Injection	
8	Spring - Injecting Inner Beans	
9	Spring - Injecting Collection	
10	Spring - Beans Auto-Wiring	
11	Annotation Based Configuration	
12	Spring - Java Based Configuration	
13	Spring - AOP with Spring Framework	
14	Spring - JDBC TEMPLATE	
15	Frontend - HTML and CSS	Day 19 to Day 20
	JavaScript ES6	
16	Introduction, Basics, What and How?	
17	var, let, const, Operators, console, template literals	
18	Data Types - String, Arrays and Objects	
19	if-else, switch, for, for-in, for-of, while, do-while	
20	DOM, Events, query methods, event listeners	

21	Arrays - map, filter, reduce, sort	
22	Functions - Arrow Functions, this, default params	
23	Destructuring, Rest and Spread Operators	
24	Promises - async, await, fetch, try...catch	
25	Modules - default & named exports, Basic TypeScript	
	React	Day 21 to Day 22
1	React Basics	
2	Dev environment, node, npm, project structure.	
3	Functional and Class Components, Component Lifecycle	
4	JSX, React CSS, Props and State	
5	React Fragments and Conditional Rendering	
6	React's Event handling model	
7	Lists and Keys, Forms in React	
8	React Hooks - useState, useEffect, useReducer	
9	React Router - SPA, Dynamic and Nested routes	
10	HTTP - async/await, axios	
11	Exception handling, Error Boundaries	
12	Redux - State management, Toolkit	
13	React testing with Jest	
25	SPRING MVC	Day 23 to Day 24
26	Spring MVC - Overview	
27	Spring MVC - Environment Setup	
28	Spring MVC - Hello World Example	
29	Spring MVC - Form Handling	
30	Spring MVC - Form Handling	
31	Spring MVC - Page Redirection	
32	Spring MVC - Static Pages	

33	Spring MVC - Form Tag library	
34	Spring MVC - Textbox	
35	Spring MVC - Password	
36	Spring MVC - Textarea	
37	Spring MVC - Checkbox	
38	Spring MVC - Checkboxes	
39	Spring MVC - Radiobutton	
40	Spring MVC - Radiobuttons	
41	Spring MVC - Dropdown	
42	Spring MVC - Listbox	
43	What is a Web Service?	Day 25
44	Advantages of Web Services	
45	Types of Web Services	
46	Soap Web Service	
47	Rest Web Service	
48	JAX-WS API Example	
49	JAX-RS API Example	
50	Create RESTful API's USING SPRING	
51	Reacts integration with Spring Boot	Day 26
	PROJECT WEB BASED (CAPSTONE PROJECT)	Day 27 to Day 28
1	Monolithic Architecture	Day 29
2	Distributed Architecture	
3	Service oriented Architecture	
4	Microservice and API Ecosystem	
5	Microservices in nutshell	
6	Point of considerations	

7	SOA vs. Microservice	
8	Microservice & API	
9	Making Microservice in spring	
1	Overview	Day 30 to Day 35
2	Unix / Linux - File Management	
3	Unix / Linux - Directories	
4	Unix / Linux - File Permission	
5	Unix / Linux - Environment	
6	Unix / Linux - Basic Utilities	
7	Unix / Linux - Pipes & Filters	
8	Unix / Linux - Processes	
9	All basic Commands	
1	Jenkins - Overview	
2	Jenkins - Installation	
3	Jenkins - Tomcat Setup	
4	Jenkins - Git Setup	
5	Jenkins - Maven Setup	
6	Jenkins - Configuration	
7	Jenkins - Management	
8	Jenkins - Setup Build Jobs	
9	Jenkins - Unit Testing	
10	Jenkins - Automated Testing	
11	Jenkins - Notification	
12	Jenkins - Reporting	
13	Jenkins - Code Analysis	
14	Jenkins - Distributed Builds	
15	Jenkins - Automated Deployment	
16	Jenkins - Metrics and Trends	

17	Jenkins - Server Maintenance	
18	Jenkins - Continuous Deployment	
19	Jenkins - Managing Plugins	
20	Jenkins - Security	
1	What is Git?	
2	How does Git work?	
3	Branches	
4	Commits	
5	What are the benefits of Git?	
6	Collaboration with GitHub	
7	Basic Commands	
8	Git - Home	
9	Git - Basic Concepts	
10	Git - Environment Setup	
11	Git - Life Cycle	
12	Git - Create Operation	
13	Git - Clone Operation	
14	Git - Perform Changes	
15	Git - Review Changes	
16	Git - Commit Changes	
17	Git - Push Operation	
18	Git - Update Operation	
19	Git - Stash Operation	
20	Git - Move Operation	
21	Git - Rename Operation	
22	Git - Delete Operation	
23	Git - Fix Mistakes	
24	Git - Tag Operation	
25	Git - Patch Operation	

26	Git - Managing Branches	
27	Git - Handling Conflicts	
28	Git - Different Platforms	
29	Git - Online Repositories	
1	What is Cloud Computing?	
2	History of Cloud Computing	
3	Why is Cloud Computing popular?	
4	Characteristics of Cloud Computing	
5	Benefits of Cloud Computing	
6	Cloud Computing Architecture	
7	Types of Clouds	
8	Public Cloud	
9	Private Cloud	
10	Hybrid Cloud	
11	Community Cloud	
12	Cloud Computing Services	
13	SaaS	
14	PaaS	
15	IaaS	
16	Demo for AWS	