JAVA Table of Content- 17th Sept'25

Day	Topic	Updated Teaching Session
Day 1	PLT	PLT
Day 2	1)Programming Baiscs i)Various basic java programming Concepts, operators ii)Conditional statement , loops, switch cases iii) Java Array Manipulation	Introduction **Teaching Session - 1** Various basic java programming Concepts , Conditional statement , switch cases, **Teaching session - 2** Various types of loops **Teaching session - 3** Array Part-1
Day 3	2) Arrays and strings i) Various methods related to string	Doubt clearing session **Teaching Session - 1** Arrays Part-2 **Teaching session - 2** String **Teaching session - 3** String Methods
Day 4	3)OOPS programming i) OOP basics ii)Method overloading iii) Static Members & Methods iv)Inheritance	Doubt clearing session **Teaching Session-1** OOPS **Teaching Session-2** Method Overloading, Static Members & methods **Teaching Session-3** Inheritance
Day 5	4) Run time polymorphism i) Final variable & methods, Final class ii) Abstract class & Methods iii) Method Overidding iv)Interface	Doubt clearing session **Teaching Session-1** Method Overidding **Teaching Session-2** Abstract Class & Methods **Teaching Session-3** Interface
Day 6	5) Exception Handling i) try catch finally ii)throw, throws iii)custom exceptions	Doubt clearing session **Teaching Session-1** try catch **Teaching Session-2** throw & throws **Teaching Session-3** custom exceptions **(Weekly Assessment -1)**
Day 7	6)Collection i) ArrayList ii)LinkedList iii)HashSet iv)TreeSet v) Comparable & Comparator	Doubt clearing session **Teaching Session-1** **Teaching Session-2** HashSet & TreeSet **Teaching Session- 3** Comparable & Comparator
Day 8	7) Map i) Hashmap ii) Tree Map iii) LinkedHashMap	Doubt clearing session **Teaching Session-1** HashMap **Teaching Session-2** LinkedHashMap **Teaching Session-3** Tree map
Day 9	Milestone Preparation (Extra Day 1)	Milestone Preparation (Extra Day 1)
Day 10	8) RDBMS Basics & MySQL Queries i) RDBMS Basics , Select, update, delete, inset queries and Joins ii) JDBC Basics	Doubt clearing session **Teaching Session-1** RDBMS Basics

		Teaching Session-2	JDBC - 1
		Teaching Session-3	JDBC-2
Day 11	JDBC Crud Operations	Doubt clearing session	
		Teaching Session-1 Results Set	
		Teaching Session-2	Maven
		Teaching Session-3	Html, CSS
Day 12,13, 14 & 15	**Recap & Milestone 1**	**Recap & Milestone 1**	
Day 16	**6) Webservices** i) Introduction ii)Clint and server communications iii)What is a Tomcat server iv)What is a servlet v)What http protocol vi)JSON and xml	**Doubt clearing session**	
		Teaching Session - 1 Understanding of client and server technology Webservices Introduction Webserver (Example Tomcat)	
		Teaching session - 2 Understanding of servlet . How Servlet works.	
		Teaching session - 3 Understanding of HTTP protocol , methods What is JSON **+ PRE CEFR**	
		Experiential Learning / Incremental Project Learning -Day1	
Day 17	**7) Spring framework** i)Spring IOC Introduction ii)Spring DI and Autowiring iii)Introduction to Spring framework iv)Hello world program in Springboot	Doubt clearing session	
		Teaching Session-1 DI example and IOC container - How Runtime polymorphism concept behind DI	
		Teaching Session-2 Autowiring concept and annotations Introducing Springboot	
		Teaching Session-3 Introducing Springboot	
		Experiential Learning / Incremental Project Learning -Day2	
Day 18	**7)spring framework [Continued] And** **8) Springboot** i)Various layers in Rest API ii)Ability to implement Exception Handling, iii)Validation iv)Various Response Code v)CRUD operation with collections.	Doubt clearing session	
		Teaching Session-1 Springboot Get mapping and Post mapping Using Postman Necessary annotations	
		Teaching Session - 2 Various layer in Springboot REST API. Various Response codes(404, 200 ,500 etc)	
		Teaching session - 3 Use of Exception handling on Springboot. Creation of Custom Exception on Springboot**+Milestone 1 Retest**	
		Experiential Learning / Incremental Project Learning -Day3	
Day 19	**9) ORM Tool** i)What is ORM tool. Ii)Diff between ORM and JDBC iii)Hibernate and JPA example iv)Configurations and Annotations v)Crud operations with JPA /Hibernate	Doubt clearing session	
		Teaching session - 1 Springboot application for CRUD operations using Collections.	
		Teaching session - 2 ORM Introduction. Advantage of ORM over JDBC	
		Teaching Session-3 Use of Hibernate/JPA Stereotype Annotations CRUD operations using necessary annotations	

		Experiential Learning / Incremental Project Learning -Day4

Day 20	**10) Spring data JPA** i) Spring Boot JPA introduction ii)Single entity CRUD by Springboot JPA iii)JPQL (eg : find by name query)	Doubt clearing session
		Teaching Session-1 Various JPA Annotations
		Teaching Session-2 Introduction of Springboot JPA.
		Teaching Session-3 JPQL
		Experiential Learning / Incremental Project Learning -Day5

Day 21	**11) Normalization and RDBMS** i) What is Normalization ii) Referential integrity constraints iii) Normalization up to 3NF iv)Implementation of Normalization based on project related entities With help of problem statement .	Doubt clearing session
		Teaching Session - 1 Normalization
		Teaching session - 2 Recap
		Teaching session - 3 **Weekly Assessment 2**
		Experiential Learning / Incremental Project Learning -Day6

Day 22	**12) Springboot JPA Mapping** i) Various mapping in Spring Boot ii)Associations and appropriate annotations	Doubt clearing session
		Teaching Session-1 One to One association and crud operation using Springboot JPA.
		Teaching Session-2 One to Many association and crud operation using Springboot JPA. Understanding of Mapped by.
		Teaching Session-3 Many to One association and crud operation using Springboot JPA with One more example
		Experiential Learning / Incremental Project Learning -Day7

Day 23	**12) Springboot JPA Mapping [Continued]** i) Many to many and many to many example ii)Commonly used / Necessary Annotations ii)Debugging of Spring boot application	Doubt clearing session
		Teaching Session-1 Many to Many association and crud operation using Springboot JPA
		Teaching Session-2 Debugging of Spring boot application and bug fixing , other Guidelines
		Teaching Session-3 Debugging of Spring boot application and bug fixing , other Guidelines
		Experiential Learning / Incremental Project Learning - -Day8

Day 24	Spring Security i)Spring Boot application with basic security controls ii) Authentication, Authorization iii)Securing endpoints with HTTP Basic authentication	Doubt clearing session
		Teaching session - 1 Understanding token based Spring boot security.
		Teaching Session - 2 Implementing JWT token
		Teaching Session - 3 Implementing JWT Token ,**GIT Upload**
		Experiential Learning / Incremental Project Learning -Day9

Day 25	Spring Security[Continued] i)JWT Token	Doubt clearing session
		Teaching session - 1 Implementing JWT Token
		Teaching session - Implementing JWT Token
		Teaching Session-3 Implementing JWT Token , GIT Upload
		Experiential Learning / Incremental Project Learning -Day10

Day 26	Version control System	Doubt clearing session

	Git and GitHub introduction	**Teaching Session-1** What is Version control and why it is required. GIT introduction and GIT CLI
		Teaching Session-2 Repository management : GIT various commands like GIT Clone , commit , push etc.
		Teaching Session-3 Repository management : GIT various commands like GIT Clone , commit , push etc. , Git Upload
		Experiential Learning / Incremental Project Learning - -Day11
Day 27	Version control System [Continued] i)Integrate IDE with Git - VS and VS code ii)Git basics and CLI iii)Repositories management iv)Git files, cloning, check-in and commit v)Git branch and merge conflicts vi)GitHub vii)Fork and push, pull, sync	**Doubt clearing session**
		Teaching Session-1 Branch creation on GIT HUB and push code to new branch.
		Teaching Session -2 Merge conflict
		Teaching Session-3 Understanding of Spring security basic. Understanding of Authentication and Authorization, Git upload
		Experiential Learning / Incremental Project Learning -Day 12
Day 28	**Milestone 2**	Doubt clearing session
		Teaching Session-1 Recap
		Teaching Session-2 Recap
		Milestone 2
Day 29	**15) JavaScript** i) Basics , Iterators ii) Classes, methods iii)Functions	Doubt clearing session
		Teaching session - 1 Understanding of JavaScript Learn and apply both inline JavaScript , reference JavaScript.
		Teaching Session - 2 Java script object and array creation. JavaScript Basics , Constructs Classes and methods
		Teaching session - 3 JavaScript functions and return types. Arrow Functions
		Experiential Learning / Incremental Project Learning - Day 13
Day 30	**15) JavaScript [Continued]** ii)Create events and DOM manipulations. iii)Able to debug JavaScript	Doubt clearing session
		Teaching Session - 1 JavaScript Class , Properties and objects .
		Teaching session - 2 JavaScript Class , Properties and objects .
		Teaching session - 3 Java script events and Dom manipulations.
		Experiential Learning / Incremental Project Learning - Day 14
Day 31	**16) Typescript** i) what is Type script ii) building blocks iii) Strings iv) Arrays v) functions vi) Java Script ES6 vii)Arrow Functions viii) Promises	Doubt clearing session
		Teaching Session-1 Typescript Datatypes , Strings manipulations Functions
		Teaching Session-2 Arrays and Various manipulations Advanced Array.
		Teaching Session-3 What is Promises Advantage and usage of Promises **+Milestone 2 Retest**
		Experiential Learning / Incremental Project Learning -Day 15
Day 32	**17) Angular** i) Installation and helloworld program ii)Understanding of Angular various components. Iii)Data binding -interpolation	Doubt clearing session
		Teaching Session - 1 Angular Basics Recap

		Teaching session - 2
		Various packages and files.
		Angular CLI Usage
		Using Components
		Template and Template URL
		Teaching session - 3
		Data binding
		Interpolation

Day 33	**17) Angular [Continued]**	Doubt clearing session
	li) Various types of data binding	**Teaching Session-1**
	- data binding, two way binding , property binding , event binding	One way binding
		Property Binding
		Teaching Session-2
		Event binding and why it is required.
		Teaching Session-3
		Two way Binding , Use of NgModel

Day 34	**17) Angular [Continued]**	Doubt clearing session
	i) Inter component communication.	**Teaching Session-1**
		Router Parameters
		Query Params
		Teaching Session-2
		@Input and @Output
		Teaching Session-3

Day 35	**17) Angular [Continued]**	Doubt clearing session
	i)Directives	**Teaching Session - 1**
	ii)Pipes	What is Directives and why it is required.
		Types of Directives .
		Teaching session - 2
		Various directives like ngif , ngClass ngFor etc.
		Teaching session - 3
		Use PIPES to transform data for display.
		Weekly Assessment 3

Day 36	**17) Angular [Continued]**	Doubt clearing session
	i)Routing	**Teaching Session - 1**
	ii) Forms and validation	Routing : Routing configuartion and use of Routing to create header , footer and navigation.
	iii)Template Driven form	**Teaching Session - 2**
	iv))Reactive form, Validators	Using Template Driven form for passing data between forms.
		Reactive form: Use of reactive form to dynamically display form data.
		Teaching Session - 3
		Form validation using angular Validators

Day 37	**17) Angular [Continued]**	Doubt clearing session
	i)Services	**Teaching Session-1**
	ii) Observables	Use of Services and Observable
	iii) HttpClient	Retrieve hardcoded data from any JSON or Array object by using Services.
		Teaching Session-2
		Use of Services and Observable [Continued]
		Teaching Session-3
		Use of Http client for retrieving data from Springboot

Day 38	**17) Angular [Continued]**	Doubt clearing session
		Teaching Session - 1
	i) Angular Auth	HttpClient Recap, Integration of Back End to Front End

		Teaching session - 2 Angular Auth : Use of Angular auth for Admin and user Login / dashboard. Use of Angular Auth guard	
		Teaching session - 3 Angular Auth : [Continued]	
		Experiential Learning / Incremental Project Learning -Day 22	
Day 39	**17) Angular [Continued]** i) Bootstrap ii)Jasmine and Karma	Doubt clearing session	
		Teaching Session-1 Implementation and uses of Bootstrap components	
		Teaching Session - 2 Implementation of Jasmine and Karma	
		Teaching session - 3 Implementation of Jasmine and Karma [continued]	
		Experiential Learning / Incremental Project Learning -Day 23	
Day 40	**18) Junit** i) What is test and test case ii) What is unit testing iii) Introduction about JUnit iv)Writing Various Unit test cases **19)Agile** i) Agile methodology ii) Necessary methods and guidelines for upcoming project gladiator phase	Doubt clearing session	
		Teaching Session -1 Junit and why it is required	
		Teaching Session - 2 Junit common Annotations used in unit testing, Mockito. Mocking of the data for unit testing.	
		Teaching Session - 3 Agile ,Scrum , Sprint ,Agile methodology to be used in project Gladiator	
		Experiential Learning / Incremental Project Learning -Day 24	
Day 41	Recap of the End to end application Any Left Over Topics Revision Mock Que Ans practices doubt solving etc	Recap , Experiential Learning project / Incremental project enhancements	
Day 42	Recap of the End to end application Any Left Over Topics Revision Mock Que Ans practices doubt solving etc .	Recap , Experiential Learning project / Incremental project enhancements	
Day 43	**Mock Interview & Incremental Project Evaluation**	**Mock Interview & Incremental Project Evaluation**	
Day 44	**Milestone 3**	**Milestone 3**	
Day 45	Case Study Implementation by associates in Group	Case Study Implementation by associates in Group 1. Daily SME Connect Expectation settings , Providing guideliens , monitoring progress, resolving doubts with flow of project. 2. Checking Group Progress on platfrom Day 5 - 50% test case passing is expected Day 10 - 100% test case passing is expected	
Day 46			
Day 47		**Milestone 3 Retest**	
Day 48			
Day 49	Case Study Implementation by associates in Group	**3.Currently Trainer will maintain excel sheet for daily progress of each learner** One Day before final presentation day - review against each learners will be provided by Trainer . **4. Vendor should be able toprovide the daily progress of each learner as an autoevalated report**	
Day 50			
Day 51			
Day 52			
Day 53			
Day 54			
Day 55			
Day 56	Self Preparation		
Day 57	**Project Evaluation**	**Project Evaluation**	