

Sl.no	Topic	Sub Topic	Dates
Programming Fundamentals using Java			
1	Language Fundamentals	We will use Java 17 for this programme OOP concepts,is-a,has-a relation ship Identifying different classes,attributes,functionality and relationship between the classes,Java features javac, java command, JDK JRE and API introduction, Data types, Operators,if, switch ,loops	24-Jul-Wed
2	OOP	Arrays, Multi dimensional Arrays, java.util.Arrays,class, objects, Naming conventions and good practices String methods, String class new methods(isBlank(),lines(), stripLeading(),stripTrailing())	25-Jul-Thu
3	Constructors,package	Setter and Getter methods,static variables and methods, Method over loading, Object Arrays, passing arrays, how objects and primitive values are passed to methods ,Constructors,package , Debugging Java Application in IntelliJ Idea Community	26-Jul-Fri
4	Inheritance, Polymorphism	Inheritance, Calling constructors in same class and super class. Overriding, Run time polymorphism using overriding, Abstract class, Abstract methods. Final keyword. Interfaces , private methods in interfaces, Records and Sealed Classes	29-Jul-Mon
5	Interfaces, Layered Architecture	Access specifiers, Interface as contract. Layered architecture Using Interface to refer the Objects and its uses. Loosly coupled application using interfaces , Usage of Factory and singleton patterns , Package, Access specifiers, final, Overriding equals, hashCode.	30-Jul-Tue
6	Exception Handling, Introduction to IO	try, catch, throw, throws, finally, user defined exceptions, exception rethrowing between layers, try with resources.	31-Jul-Wed
7	IO,File Handling,Multithreading	Byte streams & char streams. FileInputStream,ObjectInputStream,File, Serialization, Multithreading basics	1-Aug-Thu
8	Multi Threading, Introduce Collection Framework	Threading basics, Runnable,synchronization. Collection framework,Interfaces Implementation classes, Collections, Generics , List, Set and Sorted Set	2-Aug-Fri
9	Collection with Generics,Functional Interfaces , Lambda Expressions	Map,Iterator, Comparator,Comparable,equals,hashCode, Working with Dates,SimpleDateFormat, Converting String to Date &Date to String and Java 8,Concept of Functional programing, , OOP Vs Functional Programing,Functional Interfaces, Lambda Expressions Date API	5-Aug-Mon
10	SQL,JDBC	SQL, queries, insert, update, delete, joins.JDBC Architecture, Prepared Statement,ResultSet , ResultSetMetaData,Transaction,	6-Aug-Tue
11	Linux	Linux fundamentals, file & directory structure,Shell commands, Filters	7-Aug-Wed
12	HTML,CSS,Java Script	HTML forms, Java script, Functions, Validations, basics of css, AJAX, HTTP request, JSON	8-Aug-Thu
13	Java Web application, MVC Pattern	HTP request,Concept of MVC, Developing Web application, Overview of REST	9-Aug-Fri
14	TDD and Observability	Junit , Observability with Splunk(Introduction to Observability,Introduction to Splunk Slunk Environment set up Understanding splunk dashboard Basic Search in Splunk . Log Monitoring using splunk)	12-Aug-Mon
Specialization (Java new Features,Spring,ReactJS)			
1	Java New features	All New Enhancements from java 8 - java 17, Optional class , default and static methods in interfaces , Files class,(readString(),writeString()),Stream API , Modular programing , Immutable collections ,Records , Sealed Classes , Text Blocks	13-Aug-Tue
2	Java New features & Spring	Switch expresstion , Pattern Matching with instanceof Opertor, Virtual Thread, Spring Framework, Spring Boot ,Dependency Injection. ApplicationContext,	14-Aug-Wed
3	Spring	XML configuration. Autowire. Annotation based confituration,Spring Boot , MVC , Concepts of AOP	16-Aug-Fri
4	Spring	Spirng Jdbc (JdbcTemplate and JdbClient),Spring REST - Understanding Request and Response formats , data validation , Exception handling	19-Aug-Mon
5	Spring	Spring Data Jpa(MYSQL / H2), Micro services, Inter service communication (Rest Template, Rest Client),	20-Aug-Tue
6	Spring	Service discovery in microservices(Eureka), Spring cloud gateway Micro service with Spring Securiy	21-Aug-Wed
7	Spring	Testing Rest Appli caton all layers using junit , Logging , Quiz	22-Aug-Thu
8	ReactJs	Node.js Single page applications, NodeJS, ReactJS, ES6,JSX, Virtual Dom, functional & class components,	23-Aug-Fri
9	ReactJs	props , state, event handling, working with arrays, component to component communications, componenet life cycle, Form handing in React, Forms Validation, Routing	26-Aug-Mon
10	ReactJs	axios, adding style, consuming micro services,REST calls get,post,put,delete. End to end application	27-Aug-Tue