				Marathawada Mitra Mandal's			
				Institute of Technology			
				Final Year Training Schedule			
Mode	**Day**	**Date**	**Time**	**Hrs.**	**Batch**	**Trainer**	**Topics**
Offline	Monday	11-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Setup Development Environment (JRE, JDK, Eclipse) Features of Java JVM Architecture JDK & Its usage
Offline	Monday	11-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Structure of java class Writing your first Java program About main() method Constructor in Java
Offline	Monday	11-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Class and Object Access specifier
Offline	Tuesday	12-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Java data types, primitives & binary literals
Offline	Tuesday	12-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Arithmatic Operator Relational Operator Logical Operator
Offline	Tuesday	12-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Unary Operator Ternary Operator Assignment Operator
Offline	Wednesday	13-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	if, else if, switch break & continue keyword for loop while loop
Offline	Wednesday	13-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	do while loop static & final keyword Recursion
Offline	Wednesday	13-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Initializing an Array in Java Two dimensional array in Java Java variable arguments explained Add, update, read array elements
Offline	Thursday	14-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Sorting and searching in array Java String Array to String How to copy arrays in Java
Offline	Thursday	14-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Introduction to OOP concepts: Encapsulation Inheritance: single & multilevel Inheritance: Hierarchical" Polymorphism: Compile time and runtime polymorphism Rules of overriding and overloading of methods
Offline	Thursday	14-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	super and this keywords Up casting & down casting of a reference variable
Offline	Friday	15-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Abstract class and abstract methods Interface (implementing multiple interfaces) Final variables, final methods and final class
Offline	Friday	15-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Functional interface New interface features(Java 8 & above) Lambda expression and stream API Arrays Enumerations
Offline	Friday	15-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Access modifiers(public, private, protected and default) Packages and import statements Static imports Constructor chaining (with and without packages) Accessing protected variables and methods outside the package
Offline	Saturday	16-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Garbage collection in java Requesting JVM to run garbage collection Different ways to make object eligible for garbage collection: (Nulling a reference variable, Re-assigning a reference variable & island of isolation) Finalize method
Offline	Saturday	16-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Wrapper classes and constant pools String class, StringBuffer & StringBuilder class String pool
Offline	Saturday	16-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Exception hierarchy, Errors, Checked and un-checked exceptions Exception propagation
Offline	Monday	18-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	try-catch-finally block , throws clause and throw keyword Multi catch block Creating user defined checked and unchecked exceptions"
Offline	Monday	18-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Brief introduction to InputStream, OutputStream, Reader and Writer interfaces NIO package Serialization and de-serialization Shallow copy and deep copy Object Class & java.util Package Date, DateTime, Calendar class Converting Date to String and String to Date using SimpleDateFormat class
Offline	Monday	18-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Introduction to collections: Collection hierarchy List, Queue, Set and Map Collections List Collection: • ArrayList, LinkedList • Vector (insert, delete,search,sort, iterate, replace operations) Collections class Comparable and Comparator interfaces Queue collection Set Collection:
Offline	Tuesday	19-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	• HashSet, LinkedHashSet & TreeSet collection • Backed set collections Map Collection: • HashTable, HashMap, LinkedHashMap & TreeMap classes • Backed Map collections Generics Concurrent collections"
Offline	Tuesday	19-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	MultiThreading : Thread class and Runnable Interface sleep, join, yield, setPriority, getPriority methods ThreadGroup class Synchronization Deadlock Wait, notify and notify All methods Inner classes
Offline	Tuesday	19-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Introduction to Relational Model Understanding Basic SQL Syntax SELECT, INSERT, UPDATE, DELETE Querying Data with the SELECT Statement The SELECT List SELECT List Wildcard (*) The FROM Clause How to Constrain the Result Set DISTINCT and NOT DISTINCT Filtering Results with the Where Clause WHERE Clause Boolean Operators The AND Keyword The OR Keyword Other Boolean Operators BETWEEN, LIKE, IN, IS, IS NOT Shaping Results with ORDER BY and GROUP BY ORDER BY Set Functions Set Function And Qualifiers GROUP BY HAVING clause • Matching Different Data Tables with JOINs CROSS JOIN INNER JOIN OUTER JOINs LEFT OUTER JOIN RIGHT OUTER JOIN FULL OUTER JOIN SELF JOIN • Creating Database Tables CREATE DATABASE CREATE TABLE NULL Values PRIMARY KEY CONSTRAINT ALTER TABLE DROP TABLE
Offline	Wednesday	20-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	J2EE Overview • J2EE Container • Packaging Web applications • J2EE compliant web application • Deployment tools. • Web application life cycle • Deploying web applications
Offline	Wednesday	20-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	• Web Services Support JDBC & Transaction Management Introduction to JDBC API JDBC Architecture • JDBC Drivers JDBC Classes & Interfaces: Driver, Connection, Statement,
Offline	Wednesday	20-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Brief history of the Internet How does the Internet work? Internet Protocol; HTTP Domain Names; Domain Name Service servers HTTP Protocols o Difference between HTTP1.0, HTTP 1.1, and HTTP 2.0 o Methods – GET, POST, HEAD, PUT, DELETE, etc. o Status codes o Stateless nature of the protocol and HTTP Session Apache server

Offline	Thursday	21-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Introduction to HTML Document Object Model (DOM) Basic HTML Tags Alignment, Headings, Anchor, Paragraph, Image, Lists, Tables, and iFrames HTML5 New features in HTML5 New elements, new attributes, link relations, microdata, ARIA accessibility HTML5 Validation Audio & Video Support HTML Forms & Controls Input, Text Area, Radio Button, Checkbox, Dropdown, Submit, Reset, Button, etc.	
Offline	Thursday	21-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Introduction to CSS, Styling HTML with CSS, Structuring pages with CSS, Inline CSS, Internal CSS, External CSS, Multiple styles, CSS Fonts CSS Box Model id Attribute, class Attribute HTML Style Tags Linking a style to an HTML document	
Offline	Thursday	21-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Introduction of UI Scripting The Best Experience for All Users Desktop, Tablet, Mobile Bootstrap Overview of Bootstrap, Need to use Bootstrap Bootstrap Grid System, Grid Classes, Basic Structure of a Bootstrap Grid Typography	
Offline	Friday	22-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Components – Tables, Images, Jumbotron, Wells, Alerts, Buttons, Button Groups, Badges/Labels, Progress Bars, Pagination, List Groups, Panels, Dropdowns, Collapse, Tabs/Pills, Navbar Forms, Inputs Bootstrap Themes, Templates Lab	
Offline	Friday	22-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Introduction to JavaScript Variables in JavaScript Statements, Operators, Comments, Expressions, and Control Structures JavaScript Scopes Strings, String Methods Numbers, Number Methods Boolean Values Dates, Date Formats, Date " Methods Arrays, Array Methods Objects, Object Definitions, Object Properties, Object Methods, Object Prototypes Functions, Function Definitions, Function Parameters, Function Invocation, Function Closures Object Oriented Programming o Method, Constructor, Inheritance, Encapsulation, Abstraction, Polymorphism	
Offline	Friday	22-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Document Object Model (DOM) o Object hierarchy in JavaScript o HTML DOM, DOM Elements, DOM Events o DOM Methods, DOM Manipulation Forms, Forms API, Forms Validation" Regular Expressions Errors, Debugging Introduction to Browser Dev Tool Pushing code quality via JSLint tool	
Offline	Saturday	23-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	· Hibernate Framework · Introduction to Hibernate Framework Architecture Creating web application using Hibernate API o Lifecycle of Hibernate Entities HB with annotation example	
Offline	Saturday	23-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	· Hibernate Mappings and Relationships · Collection and Component Mapping · HQL, Named Queries, Criteria Queries Lab	
Offline	Saturday	23-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	• What is Spring Framework • Overview of Spring Architecture • Spring Modules Overview Understanding Spring 4 annotations(Basic Introduction) What is IoC (Inversion of Control) IOC container Dependency Injection	
Offline	Monday	25-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Spring Beans and its lifecycle Autowiring Beans Configuring collections Spring Validations Spring i18n, Localization, Properties File Upload example	
Offline	Monday	25-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	• Spring Boot essentials • Why Spring boot • Spring Boot Overview • Basic Introduction of MAVEN • Building Spring application with Boot	
Offline	Monday	25-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	• Spring Boot in detail (Use Spring Boot for all demo & assignments here onwards) Running a web application using Spring Boot with CRUD (with Static Data not DB) Spring Data Module • Spring Data JPA (Repository support for JPA) •CrudRepository&JPAReposit ory • Query methods • Using custom query (@Query)	
Offline	Tuesday	26-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	Building REST services with Spring • Introduction to web services • SOAP Vs RESTful web services • RESTful web service introduction	
Offline	Tuesday	26-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	• Create RESTful web service in java using Spring Boot • RESTful web service JSONexample • RESTful web service CRUD example • Using POSTMAN client to invoke REST API's • REST service invocation using REST Template	
Offline	Tuesday	26-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	• Introduction to unit testing • Introduction to Junit - Fix the annotations - Assert Exceptions - Run Tests	
Offline	Wednesday	27-Mar-2024	9.00 AM to 11.00 AM	2	B1	Akhilesh	• Introduction to Mockito - Create DAO and BO Layer - Adding Mockito Dependency - Stubbing and Setting Expectation - Result verification • Unit Testing of Spring Service Layer	
Offline	Wednesday	27-Mar-2024	11.15 AM to 1.15 PM	2	B1	Akhilesh	Doubt Clearing & Practice Session	
Offline	Wednesday	27-Mar-2024	2.00 PM to 4.00 PM	2	B1	Akhilesh	Doubt Clearing & Practice Session	