

Week	Day	Topics	Objectives / Learning Outcomes	Learning in Hours	Virtual Instructor Led Session (Hrs)	Hands-on Assignment (Count)	Module Name / Video Name - Module Duration	Course Duration (Hrs)	Course Name
	Day-0	Orientation Foundation Hrs	N/A						
Week 1	Day-1		Basic Java programming concepts, including data types, Conditionals, loops, functions, exception handling	2		2	Setting up Local Development - 1hr 19m Java Installation (step by step) - 0h 10m 23s Java path setting (environment variables) - 0h 09m 38s IntelliJ IDEA Installation - 0h 09m 19s Getting start IntelliJ IDEA - 0h 07m 52s First Java Hello World program - 0h 14m 37s Java output – print from code - 0h 06m 19s Java comments - 0h 04m 49s	02:21:00	Java 21 Programming Masterclass: Fundamentals for Beginners
	Day-2			2			Java Operators - 34m Java Logical Operators - 17m Java String - 41m Java Decision MakingStatements - 32m	02:04:00	Java 21 Programming Masterclass: Fundamentals for Beginners
	Day-3			2			Java Control Flow Statements - 45m Java Arrays - 24m Java Methods - 9m Java Project - 35m	01:53:00	Java 21 Programming Masterclass: Fundamentals for Beginners
	Day-4		Understanding Object-Oriented Programming (OOP) concepts (Inheritance, Polymorphism, Encapsulation), Exception Handling and its importance in Robust Code	2		2	Java Classes and Objects - 54m Java Class Methods - 39m Java Constructors - 15m	01:48:00	Mastering Advanced Java with Object-Oriented Programming
	Day-5			2			Java Inheritance - 44m Java Polymorphism - 21m Java Access Modifiers - 25m Java Encapsulation and Abstraction - 44m	02:14:00	Mastering Advanced Java with Object-Oriented Programming
									Week 1-KBA on the basis of Java 21 Programming Masterclass: Fundamentals for Beginners & Mastering Advanced Java with Object-Oriented Programming courses
Week 2	Day-6	Programming - Java Part 1	Java Exception Handling - Checked & Unchecked Exceptions, Throwing Exceptions, Stack Trace, Exception Insights, Exception Analysis, Try-Catch-Finally, Catch with Return, Variations	2		2	Introduction - 9m Getting Started - 27m Checked Exception - 39m Unchecked Exception and Checked Exception - 46m	02:01:00	Java Case Study - Exception Handling
	Day-7			2			Throwing Exceptions - 21m Stack Trace When An Exceptions Thrown - 25m Better Insight of Exception - 20m Exception Broader Analysis - 13m	01:19:00	Java Case Study - Exception Handling
	Day-8			2			Try-Catch-Finally - 1hr 1m Catch with Return and Catch With Multiple Return - 36m	01:37:00	Java Case Study - Exception Handling
	Day-9			2			Variations - 55m	00:55:00	Java Case Study - Exception Handling
	Day-10		JavaScript Basics, Variables, Datatypes, Type Conversions, Operators, Comparisons, Interactions, Loops, Function expression, Control Flow, Conditionals, Array, String, Date, Math, Number, Objects	2			Output with JavaScript - 0h 13m 47s Variables in JavaScript - 0h 12m 34s Math in JavaScript - 0h 09m 38s JavaScript Conditional - 0h 15m 23s Switch...Case - 0h 07m 40s While and Do...While Loops - 0h 13m 52s For Loops - 0h 05m 10s JavaScript Arrays - 0h 13m 42s JavaScript Functions - 0h 15m 10s JavaScript Sets and Maps - 0h 11m 07s	01:57:00	JavaScript Foundations Course
									Week 2-KBA on the basis of Java Case Study - Exception Handling courses
Week 3	Day-11			2		1	JavaScript Events - 0h 12m 39s JavaScript Audio - 0h 12m 27s	02:11:00	JavaScript Foundations Course
	Day-12		Basic Unit Testing (JUnit/NUnit), Unit Testing, Basic Test Case Writing, Code Quality Metrics, Code Review Practices	2		1	Introduction - 27m Write Test - 37m Annotations - 27m Assertions and Different Types - 50m	02:21:00	Learn unit Testing with Junit
	Day-13		Introduction to IDE (e.g., Eclipse, IntelliJ), IDE Navigation, Creating Simple Projects, Introduction to Build Tools (Maven, Gradle), Build Lifecycle, Command-Line Operations		2				
	Day-14		Complex Data Structures (Arrays, Lists, Maps), Understanding Java Collections Framework, Concurrency Basics (Threads and Synchronization), Code Organisation and Modularisation, Debugging Tools, Debugging Techniques in IDEs Step-Over, Step-into, and Breakpoints, Troubleshooting Skills		2				
	Day-15			2			Course Overview - 10m REST Fundamentals - 30m Consuming a RESTful API - 31m Building a RESTful API - 29m	02:24:00	API and REST-SD1
									Week 3-KBA on the basis of JavaScript Foundations Course , Learn unit Testing with Junit & API and REST-SD1 courses
Week 4	Day-16	Programming - Java Part 2	Introduction to RESTful APIs, Understanding HTTP Protocols, Basic API Request and Response Structure, API Testing Tools (Postman), Basic Authentication (API),JSON Parsing and Serialization, XML Parsing (DOM and SAX), Microservices Communication (REST vs. gRPC), API Gateway in Microservices	2		1	Prerequisite Installations and Setup - 0h 11m 28s REST Assured - Preparing Your Framework - 0h 31m 22s REST Assured - Different Request Types - 0h 41m 05s REST Assured - Assert and Extract from the Response Body - 0h 24m 46s	01:48:00	REST Assured Fundamentals
	Day-17			2			REST Assured - Serialization, Schema Validation, and Measuring Response Time - 0h 34m 07s Using Groovy GPath for JSON in REST Assured - 0h 28m 02s Using Groovy GPath for XML in REST Assured - 0h 28m 46s Conclusion - 0h 01m 02s	01:32:00	
	Day-18			2			Demystifying Microservices - 0h 20m 48s Related Architecture Styles and Use Cases - 0h 27m 05s Building Microservices with Spring Boot - 0h 43m 27s Applying Microservices Concepts - 0h 26m 20s	01:57:00	Spring 5.0 Microservices
	Day-19			2			Microservices Capability Model - 0h 23m 23s Microservices Evolution - A Case Study - 0h 38m 47s Scale Microservices with Spring Cloud Components - 1h 08m 19s	02:08:00	
	Day-20			2			Logging and Monitoring Microservices - 0h 52m 03s Containerizing Microservices with Docker - 0h 26m 40s Scaling Dockerized Microservices with Mesos and Marathon - 0h 33m 25s Microservice Development Life Cycle - 0h 14m 37s	02:06:00	
									Week 4-KBA on the basis of REST Assured Fundamentals & Spring 5.0 Microservices courses
	Day-21		Introduction to SQL, Basic SQL Queries (SELECT, INSERT, UPDATE, DELETE), Understanding Tables and Relationships, Data Storage Concepts	2		1	Introduction - 6m Installation - 10m Table Creation - 17m Data Fetch - 28m Table Update - 14m Data Update - 12m	01:27:00	Mysqj Fundamentals
	Day-22	MILESTONE ASSESSMENT 1							

Week 5	Day-23	Basic understanding of Cloud Computing, DevOps	Cloud: Intro to Cloud computing, Cloud service providers, Core cloud concepts	2		1	Introduction - 2h 01m 56s Let's Talk Azure - 0h 01m 56s Let's Talk Azure - 0h 14m 52s Let's Learn AWS - 0h 20m 26s	01:48:00	Introduction to Cloud Computing [uploaded 2023]
	Day-24		Docker Basics, Containers and Images, Basic Kubernetes Concepts, understanding of CI/CD Concepts	2		1	Mastering Docker & its components - 31m Mastering Kubernetes and its components - 55m	01:26:00	Docker & Kubernetes Interview Readiness Course
	Day-25			2			Introduction - 1hr 57m	01:57:00	The DevOps Essentials - The Handbook
			CI/CD: Intro to GCD, Core concepts, CI/CD pipeline basics, Intro to Tools Understanding of CI/CD Concepts, CI & CD Pipeline with Maven			1			Week 5- KBA on the basis of Myqsl Fundamentals, Introduction to Cloud Computing [uploaded 2023], Docker & Kubernetes Interview Readiness Course, The DevOps Essentials - The Handbook courses.
Week 6	Day-26			2			Welcome and Introduction - 20m Continuous Integration & Continuous Delivery with Jenkins -15m Getting Started With Jenkins - 30m CI & CD Pipeline with Jenkins, Gradle & Artifactory - 20m CI & CD Pipeline with Jenkins & Maven - 13m	01:44:00	DevOps: CI/CD with Jenkins pipelines, Maven, Gradle
	Day-27		Version Control Systems (Git Basics), Command-Line Git (clone, commit, push)	2		1	Getting Started with Git - 7m Committing Changes in the Git Repository - 32m Branches and Merging - 15m Working with Remote Repository at GitHub- 11m Exploring Git objects - 5m	01:10:00	Git and GitHub Crash Course
	Day-28		Introduction to microservices, Monolithic Applications, Architecture, Benefits, Distributed Systems.	2		1	Getting Started - 9m 39s Monolithic Applications - 25m 30s The Microservices Revolution - 16m 9s The Concept of a Microservices Architecture (MSA) - 25m 11s What are the Key Benefits of Microservices? - 27m 16s Course Summary - 8m 48s	01:53:00	A Beginner's Guide to a Microservices Architecture
	Day-29		Application Architecture Foundations- Introduction to Application Architecture, Types of Application Architecture (Monolithic, Microservices, Serverless), Common Design Patterns (MVC, MVVM), Basic Best Practices for Application Architecture (Scalability, Maintainability)		2	1			
	Day-30		Design Documents - Understand & Interpret (HLD, LLD)- Introduction to Design Documents, High-Level Design (HLD) Overview (Purpose, Key Components), Low-Level Design (LLD) Overview (Purpose, Key Components), Basic Mapping between HLD and LLD, Arch design- 2-tier and 3-tier architectures, Client-server model overview		2	1			
									Week 6- KBA on the basis of DevOps: CI/CD with Jenkins pipelines, Maven, Gradle, Git and GitHub Crash Course, A Beginner's Guide to a Microservices Architecture course
Week 7	Day-31	MILESTONE ASSESSMENT 2							
	Day-32	Automation - Selenium		2			Exploring Selenium - 23m Selenium WebDriver Architecture - 30m Working with Web Elements - 28m Advanced Selenium Techniques - 45m	02:06:00	Mastering Selenium WebDriver 3.X Test Automation
	Day-33			2			Cross-Browser Testing - 25m Advanced Selenium WebDriver - 39m	01:04:00	Mastering Selenium WebDriver 3.X Test Automation
	Day-34			2			Introduction - 3m Element Identification - 1hr 38m	01:41:00	Selenium WebDriver: Working with Elements
	Day-35		Set up Selenium WebDriver, work with Element locators, handle web elements, and synchronize actions, Try different Element locators, handle web elements, and synchronize actions.	2		2	Navigation, Manipulation, Interrogation with Selenium WebDriver - 57m Mouse and Keyboard Actions - Introduction - 7m Mouse and Keyboard Actions - Drag and Drops - 31m Mouse and Keyboard Actions - Developer Tools, Resize, Draw - 29m	02:04:00	Selenium WebDriver: Working with Elements
									Week 7 KBA on the basis of Mastering Selenium WebDriver 3.X Test Automation, Selenium WebDriver: Working with Elements
	Day-36	Automation - Selenium		2			Implicit and Explicit Waits - Introduction - 16m Implicit and Explicit Waits - Implicit Waits - 14m Expected Conditions, Default Wait, and Best Practices - 25m	01:16:00	Selenium WebDriver: Working with Elements
Week 8	Day-37		Different frameworks-Basics of hybrid, data-driven, and BDD frameworks.	2			Page Object Model - 12m Linear Scripting and Module Based Approach - 10m Reading from Data Source - XLS - 12m Writing to Data Source - XLS - 11m Library architecture for Frameworks - 11m Data Driven Approach and Keyword and Hybrid Framework Creation Approach - 28m TDD and BDD - 41m	02:05:00	Automation Framework Models Training
	Day-38		Intro to UI Automation, Fundamentals of UI Automation tools, Getting started, Core concepts - POM, Dynamic handling etc	2		1	Setting Up the Environment - 0h 15m 57s Components of a Test Framework - 0h 12m 34s Working with Web Elements - 0h 17m 41s Effective Page Object Model - 0h 15m 05s Design Patterns and Principles - 0h 20m 12s Test Reports and Making Test Results Visual - 0h 10m 25s Test Scaling - 0h 11m 03s Utilizing Continuous Integration - 0h 06m 40s	01:53:00	Building UI Automation Test Frameworks with Selenium WebDriver
	Day-39		Hands On Selenium Webdriver to try different Element locators, handle web elements, and synchronize actions		2				
	Day-40		MILESTONE ASSESSMENT 3						
									Week 8 KBA on the basis of Selenium WebDriver: Working with Elements, Automation Framework Models Training , Building UI Automation Test Frameworks with Selenium WebDriver
Week 9	Day-41	CI/CD - Jenkins		2			Continuous Integration and Continuous Delivery (CI/CD) - 1hr 11m Getting Started with Jenkins	02:25:00	
	Day-42		Setting up Jenkins pipelines, integrating automated tests with Jenkins, triggering jobs, and configuring reports.	2		2	Source Code Build Process - 4m Build Automation - 10m GIT Integration with Jenkins - 4m Configuration GIT with Jenkins - 2m Jenkins GitHub Plugin - 3m Maven Introduction - 2m Maven Setup with Jenkins - 3m Jenkins Build Introduction - 2m Source Control Polling in Jenkins - 5m Freestyle Project in Jenkins - 4m Other Build Triggers of Jenkins - 5m Pre and Post Build Action - 2m Running New Build Job - 2m Parameterized Build and Distributed Build - 10m Email Notification Using Email Plugin - 1m Jenkins Pipeline - 3m Jenkinsfile - 6m Summary - 2m Demo: Create Parameterized Jenkins Job - 9m Demo: Create Jenkins Distributed Builds Job - 14m Demo: Create Maven Build Job Along with Email Notification - 19m Code Quality - 7m How to Improve Code Quality - 3m Code Coverage - 6m Code Scanning Tools - 4m SonarQube - 2m	02:14:00	CI/CD Pipelines with Jenkins Certification Training Course
	Day-43			2			Jenkins CLI (Command Line Interface) - 32m Deployment Overview - 1hr 4m Jenkins X - 33m	02:09:00	
	Day-44		Integrate automation tests into CI workflows and handle basic failures in Jenkins pipelines.	2		2	Jenkins with Docker - 54m Jenkins with Ansible - 1hr	01:54:00	
	Day-45			2			Managing and Monitoring Jenkins - 1hr 7m Jenkins Best Practices - 52m	01:59:00	
									Week 9- KBA on the basis of Selenium WebDriver: Working with Elements, Automation Framework Models Training , Building UI Automation Test Frameworks with Selenium WebDriver

Week 10	Day-46	C/CD - GitLab	Setting up GitLab runners, configuring pipelines, integrating tests.	2		1	Automated DevOps Pipelines - 50m Build Stages, Artifacts, and Variables - 44m Automated Application Deployment - 40m	02:14:00	Hands-On Auto DevOps with GitLab CI
	Day-47			2			Application Quality and Monitoring - 37m Custom CI Infrastructure - 45m	01:22:00	
	Day-48		Troubleshooting Common Jenkins Issues (Pipeline Failures, Configuration Problems), Understanding Jenkins Plugins and Their Configurations Managing source control & C/CD integration		2				
	Day-49		MILESTONE ASSESSMENT 4						
	Day-50		Agile methodologies, test planning/execution in sprints, and continuous testing practices, Overview of Pod Model in Agile Methodology Pod Composition and Collaboration Practices.		2	1			
									Week 10 - KBA on the basis of Hands-On Auto DevOps with GitLab CI
Week 11	Day-51		MILESTONE ASSESSMENT 5						
	Day-52			2			Introduction - 32m Recording the JMeter Scripts - 37m How to put load and analyze performance metrics - 1hr	02:09:00	Learn JMeter from Scratch on Live Apps - Performance Testing
	Day-53			2		2	Advanced Thread Group Methods for Real time load with JMeter - 21m Http Cookie Manager to capture sessions - 24m Assertions in JMeter - 20m JMeter controllers for Modules wise Metrics - 1hr 10m	02:21:00	Learn JMeter from Scratch on Live Apps - Performance Testing
	Day-54		Creating test plans, thread groups, load testing, and performance analysis reports.	2			Timers in JMeter - 24m Importance of Regular expressions in JMeter - 39m Data Driven testing with JMeter - 24m Handling Dynamic Responses -Advanced JMeter-2 - 7m Handling Dynamic Responses -Advanced JMeter-3 - 6m Handling Dynamic Responses -Advanced JMeter-4 - 9m Handling Dynamic Responses -Advanced JMeter-5 - 7m	01:56:00	Learn JMeter from Scratch on Live Apps - Performance Testing
	Day-55	Performance Testing - JMeter		2			JMeter validations in Non GUI Mode - 30m JMeter Distributed Mode in running tests in Slave machines - 22m Beanshell Scripting basics for JMeter - 44m	01:36:00	Learn JMeter from Scratch on Live Apps - Performance Testing
			Distributed testing, correlation, parameterization, and integrating JMeter with C/CD pipelines.			2			Week 11 - KBA
	Day-56			2			Integration of Selenium with JMeter - 23m REST API Load Testing using JMeter - 48m Monitoring Server performance - 18m	01:29:00	Learn JMeter from Scratch on Live Apps - Performance Testing
	Day-57			2			Environment Setup - 24m	00:24:00	HP LoadRunner 12.55 (Latest Version)
	Day-58			2			YuGen - 1h 33m	1:33:00	HP LoadRunner 12.55 (Latest Version)
	Day-59			2			Controller - 1h 11m Analysis - 1h 3m	02:14:00	HP LoadRunner 12.55 (Latest Version)
Week 12	Day-60	Performance Testing - LoadRunner	Recording/enhancing performance test scripts, running tests, analyzing results, and C/CD integration for continuous testing.	2		2	HP LoadRunner - Correlation Introduction - 49m HP LoadRunner - Automatic Correlation - 16m HP LoadRunner - Manual Correlation - 34m HP LoadRunner- Correlation - Ordinal Value - 33m	02:12:00	HP LoadRunner 12.55 (Latest Version)
									Week 12 KBA on the basis of Learn JMeter from Scratch on Live Apps - Performance Testing
	Day-61			2			Parameterization - 2h 11m	02:11:00	HP LoadRunner 12.55 (Latest Version)
	Day-62		LoadRunner Script Enhancements (Parameterization) LoadRunner Script Enhancements (Correlation), Understanding Load Testing Metrics (Throughput), Understanding Load Testing Metrics (Response Time)		2				
	Day-63		MILESTONE ASSESSMENT 6						Week 13 KBA on the basis of HP LoadRunner 12.55 (Latest Version)
Week 13	Day-64		Capstone Project	16	2		Total Duration	90:52:00	
			Total Duration in Hrs	114	18	32			
					132				