Java	IntelliJIDEA CE	Maven	Git	TestNG	Log4j
Codingbat Java	https://www.jetbrains.com/idea/	https://maven.apache.org/	https://git-scm.com/	https://testng.org/	https://logging.apache.org/log4j/2.x/
W3Resource					
Introuction to Java	Installing & Exploring	Introduction & SetUp	Introduction to Git	Introduction to TestNG:	Introduction about Logging
System Setup	Setting Project JDK	pom.xml	Overview of Git and its features	Overview of the framework	Logging problems without Log4J
First Programm	Creating your first project	Build Life Cycle	Setting up Git on different operating systems (Windows, Mac, Linux)	Features and advantages	How to solve Logging problem with Log4J
Keyowords	Creating Classes	Buid Profile	Understanding Git's basic concepts (repositories, commits, branches, etc.)	Setting up TestNG:	What is Layout?
Identifiers	Increasing Font Size	Repositories	Setting up a local Git repository	Installing and configuring TestNG in Eclipse or IntelliJ IDEA.	Different types of Layouts in Log4J
Data Types and Variables	Key Mappings	Plug-ins	Understanding the basic Git commands (init, clone, add, commit, push, pull, etc.)	Writing Test Cases:	What is Appender?
Arrays	Color Themes	Create, Build and Test	Understanding the git workflow and its concepts	Using annotations such as @Test, @BeforeMethod, and @AfterMethod	Different types of Appenders
Operators	Presentation Assistant	Dependency Management	Understanding the Git branching model	Test case structure and organization	
Conditional Statements	Searching	Build and Deploy Automation	Understanding the Git merging model	TestNG Groups:	
Loops	Search with Find in Path	Maven with IntelliJIDEA	Git Collaboration	Organizing test cases into groups	
Classes	File Structure		Understanding the basics of collaboration in Git	Running specific groups of tests	
Methods	Call Hierarchy		Creating and using remote repositories (GitHub, GitLab, Bitbucket)	Data-Driven Testing:	
OOPS	Find Usages		Understanding the process of pull requests and code review	Parameterizing tests with @DataProvider annotation	
Exception Handling	Keyboard Shortcuts		Understanding the process of merging and resolving conflicts	Using Excel, CSV or XML files	
Enumerations	Generating Code		Advanced Git concepts	TestNG Listeners:	
The Java Library	Extracting Code		Understanding Git's advanced features (stash, rebase, etc.)	Implementing TestNG listeners	
String Handling	Tests		Understanding Git's advanced collaboration features (submodules, subtrees)	Customizing execution and reporting of tests	
Exploring java.lang	Debugging		Understanding the process of submodules and subtrees	TestNG Reporters:	
Generics	Git and Github Integration		Understanding Git's handling of submodules and subtrees	Generating reports using TestNG reporters	
Collections	Commits and Pull Requests		Git in real-world scenarios	TestNG Plugins:	
More Utility Classes	Maven		Implementing Git in real-world projects	Using TestNG plugins	
Input/Output			Handling and troubleshooting common issues and errors	Integration with other tools like Maven, Jenkins, etc	
Date&Time			Best practices for using Git in real-world scenarios	Advanced TestNG features:	
Lambda Expressions			Git updates and new features	Multi-threading	
Modules			Keeping up with the latest updates and new features in Git	Parallel testing	
Multithreaded Programming			Understanding how new features can be used to improve collaboration and workflow	Dependency testing	
			Practice and Project	TestNG Best Practices:	
			A final project to apply all the learning and skills acquired throughout the course	Tips and best practices for writing and maintaining test cases.	
			Real-world scenario based practice sessions	TestNG and Selenium Integration:	
			Hands-on experience on a real-world project	Configuring TestNG with Selenium WebDriver	
				Implementing test cases with Selenium and TestNG	
				Exception Handling:	
				Handling exceptions in TestNG	

Allure Reports	Selenium	RestAssured	Appium
https://qameta.io/	https://www.selenium.dev/	https://rest-assured.io/	https://appium.io/
	https://demoqa.com/		
Getting Started	Getting Started	Introduction to API Testing	Introduction to Appium
Test execution	WebDriver Interface	Overview of API testing and its importance	Overview of Appium and its features
Report generation	Desired Capabilities	Understanding the basics of REST and RESTful APIs	Setting up Appium on different operating systems (Windows, Mac, Linux)
Report structure	Locators	Understanding the different types of HTTP requests and responses	Understanding Appium architecture and its components
Overview page	Find Element and FindElements	Setting up a development environment for API testing	Appium for Android
Categories	Dynamic Waits, Implicit and Explicit waits	Introduction to RestAssured	Configuring Appium for Android testing
Suites	TextBox, Submit Button, sendkeys(), click()	Overview of RestAssured and its features	Identifying elements in Android apps using Appium
Graphs	CheckBox and Radio Button	Setting up RestAssured in a Java project	Creating and executing test scripts for Android apps
Timeline	Images	Understanding the basic syntax and structure of RestAssured	Handling different types of gestures and touch actions in Android
Behaviors	DropDown	Making GET, POST, PUT and DELETE requests using RestAssured	Appium for iOS
Packages	Mouse Click & Keyboard Events	Request and Response validation	Configuring Appium for iOS testing
Test case page	Upload & Download	Understanding the concept of request and response validation	Identifying elements in iOS apps using Appium
Flaky tests	Alert & Popup Window Handling	Validating HTTP status codes, headers and body using RestAssured	Creating and executing test scripts for iOS apps
Environment	Web Table	Using different types of matchers and assertion libraries (Hamcrest, JUnit, TestNG)	Handling different types of gestures and touch actions in iOS
Categories	Dynamic Web Tables	Validate JSON and XML response using RestAssured	Advanced Appium concepts
TestNG	Log4j	Handling JSON and XML	Handling hybrid and web apps using Appium
Jenkins	TestNG	Understanding the basics of JSON and XML data formats	Using Appium for cross-platform testing
	Dataprovider & TestNG XML	Parsing and manipulating JSON and XML data using RestAssured	Handling alerts, pop-ups, and notifications in Appium
	DatePicker/Calendar	Handling different types of JSON and XML structures	Integrating Appium with other tools such as Jenkins, TestNG, and Cucumber
	Maven & Jenkins Integration	Understanding the usage of JSON path and XML path	Appium best practices
	Handling iFrames	Handling Authentication and Authorization	Designing and maintaining Appium test scripts
	Take Screenshots	Understanding the basics of authentication and authorization in API testing	Handling different types of test data in Appium
	Robot Class	Handling different types of authentication (Basic, OAuth, JWT) using RestAssured	Reporting and analyzing test results
	JavaScriptExecutor	Handling different types of authorization (API key, token-based) using RestAssured	Troubleshooting and debugging Appium issues
	IntelliJ IDEA & Selenium Webdriver	Advanced concepts	Appium in real-world scenarios
	Github Integration	Handling file uploads and downloads using RestAssured	Implementing Appium in real-world projects
	Cookies Handling	Handling cookies and sessions using RestAssured	Identifying and handling challenges in Appium testing
	Drag and Drop	Integrating RestAssured with other tools and frameworks (TestNG, JUnit, Cucumber)	Best practices for Appium test automation in real-world scenarios
	Selenium Exception Handling	Best practices for creating and maintaining API test scripts	Appium updates and new features
	Page Object Model (POM) & Page Factory	RestAssured in Real-world Scenarios	Keeping up with the latest updates and new features in Appium
	Selenium Grid : Hub & Node	Implementing RestAssured in real-world projects	Understanding how new features can be used to improve test automation
	Browserswerstack	Handling and troubleshooting common issues and errors	Appium in mobile Application security testing
	Cross Browser Testing	Best practices for using RestAssured in real-world scenarios	How to use Appium for mobile Application security testing

Jenkins	GitHub Actions	Projects		
https://www.jenkins.io/	https://github.com/features/actions			
Introduction to Jenkins	Introduction to GitHub Actions	Insurance Domain		
Overview of Jenkins and its features	Overview of GitHub Actions and its features	Banking Domain		
Setting up Jenkins on different operating systems (Windows, Mac, Linux)	Setting up a GitHub repository for Actions	Telecom Domain		
Understanding the basics of Jenkins' architecture and components	Understanding the basic workflow syntax and structure	e-Commerce Domain		
Setting up a Jenkins master and slave nodes	Understanding the different types of events that trigger Actions	Healthcare Domain		
Jenkins Configuration	Creating Workflows			
Understanding the basics of Jenkins' configuration	Creating and configuring workflows in a GitHub repository			
Configuring Jenkins' global settings and security	Using actions and action inputs in workflows			
Setting up and configuring Jenkins' plugins	Creating and using environment variables in workflows			
Understanding Jenkins' system and build environment	Understanding the different types of job and step outputs			
Jenkins Jobs	Building and Testing			
Creating and configuring Jenkins jobs	Using GitHub Actions for building and testing code			
Understanding Jenkins' job types (Freestyle, Pipeline, Multi-configuration)	Setting up continuous integration and continuous deployment workflows			
Configuring Jenkins' build triggers and parameters	Configuring and using different testing frameworks (JUnit, Mocha, etc.)			
Understanding Jenkins' build steps and post-build actions	Integrating code coverage and quality tools (Codecov, SonarQube)			
Jenkins Pipeline	Deployment			
Understanding the basics of Jenkins' Pipeline	Using GitHub Actions for deployment to different environments (Dev, QA, Production)			
Creating and configuring Jenkins' Pipeline jobs	Understanding different deployment strategies (Blue/Green, Canary, etc.)			
Understanding Jenkins' Pipeline syntax and structure	Integrating GitHub Actions with cloud services (AWS, Azure, Google Cloud)			
Using Jenkins' Pipeline features (parameters, stages, shared libraries)	Creating and using secrets and encrypted environment variables			
Jenkins Plugins	Advanced concepts			
Understanding Jenkins' built-in plugins	Using GitHub Actions for Infrastructure as Code (IAC) and Configuration Management			
Understanding Jenkins' most popular plugins (Git, Maven, SonarQube, etc.)	Creating and using custom actions			
Understanding Jenkins' integration with other tools (JIRA, Slack, etc.)	Integrating GitHub Actions with other tools and services (Slack, Jira, etc.)			
Understanding Jenkins' handling of different	Best practices for creating and maintaining workflows			
types of plugins and their specific use cases.	Real-world Scenarios			
Jenkins in Real-world Scenarios	Implementing GitHub Actions in real-world projects			
Implementing Jenkins in real-world projects	Handling and troubleshooting common issues and errors			
Handling and troubleshooting common issues and errors	Best practices for using GitHub Actions in real-world scenarios			
Best practices for using Jenkins in real-world scenarios	GitHub Actions updates and new features			
Understanding Jenkins' handling of different types of projects and workflows.	Keeping up with the latest updates and new features in GitHub Actions			
Jenkins updates and new features	Understanding how new features can be used to improve automation			
Keeping up with the latest updates and new features in Jenkins	Practice and Project			