1. **JAVA BASICS**
   - What is Java
   - Advantages Of Java
   - JRE VS JDK VS JVM
   - How Java is Platform Independent
   - Java has both Interpreter and Compiler
   - Run Java using Notepad
   - Why Java is not pure Object Oriented
   - Memory Allocation in Java
   - Garbage Collector in Java • Access Modifiers in Java
   - Class and Objects in Java
   - New Keyword
   - Encapsulation in Java
   - Polymorphism in Java
   - Inheritance in Java
   - Java doesn't support multiple Inheritance
   - Abstract classes and Interface
   - keyword:this,super,static, final, finally
   - Exceptional Handling
   - checked Vs unchecked Exceptions in Java
   - throw vs throws in Java
   - Multiple catch blocks
   - Constructor
   - Wrapper Classes
   - Scanner classes
   - Multithreading concept in Java
   - Strings and their immutable nature
   - String based programs
   - Matrices based programs

2. JAVA ADVANCED
- What is framework
- Collection framework
- Collection Vs Collections
- List Vs ArrayList
- Programs on ArrayList
- Hashmap Vs Hashtable
- Programs on Hashmap

- Real life examples of Hashmap
- Programs on Hashtable
- Why hashtable doesn't allow null values
- What are set
- Programs on set
- Lambda Expressions
- Stream() in Java
- real life example on set
- Difference between Static and dynamic polymorphism
- Constructor overloading
- File Handling in Java
- Program to write to a file
- Program to read from a file
- JAVA pattern based programs
- Bubble sort
- Prime number
- Fibonacci programs
- Programs on sort
- Swapping two variables programs

3. SQL Queries
- Select, Insert, Update, Delete
- Create table and database
- Sql datatypes
- Sql Joins
- Distinct, Group by, having
- where, in, between, not
- max(),min(),avg(),count()
- Sql joins
- Handling date and time
- Primary, Composite, Foreign Keys

4. Introduction to Selenium Testing
- What is Selenium Testing
- Selenium IDE
- Selenium Grid
- Selenium Webdriver
- Webdriver vs Remote Control
- Disadvantages Of Selenium Testing
- Selenium Webdriver Installation

• Is it Correct WebDriver driver = new WebDriver();

• Basic driver navigation commands

• Difference between close() and quit()

• Concept of DOM

5. Selenium Basic Concepts

• Locator Types: CSS Selector, Name, ID

• Xpath, linkText, className, TagName

• FindElement Vs FindElements

• get() methods

• sendkeys()

• Handling date, radio buttons, checkboxes, dropdowns

• Implicit waits vs Explicit Waits

• PageLoadTimeOut

• Expected Conditions

• Fluent Wait

• Handling alerts, prompts, confirmations

6. Selenium Advanced Concepts

• Selectorshub installation

• Relative Vs Absolute Xpath

• Sibling and child to parent xpath

• Find element based on text

• Datepicker advanced example

• Dynamic Dropdown advanced example

• AutoSuggestive Dropdown example

• Check broken links in Selenium

• Assertions

• Soft Vs Hard Assertions

• Action classes

• Working with Frames

• Child Window Handling concept

• JavascriptExecutor

• Handling scrolls in Selenium

7. Selenium Grid and Integration

• Grid setup in local system

• Grid integration with Saucelabs

• Grid Integeration with Docker

• Grid Integration with AWS EC2

8.Automation Framework

• What is Automation Framework
• Features of Automation Framework
• Different types of Automation Framework
• What is Data Driven Framework
• What is Modular Driven Framework
• What is Keyword Driven Framework
• What is Hybrid Framework

9.TestNg

• What is TestNg
• TestNg Installation
• TestNg Project
• Adding TestNg.xml
• Exclude, Include, Regex
• TestNg Annotations
• Groups, DependsOn, enabled
• Paramterized input, global parameters
• dataProviders
• TestNg Listeners
• Priority in Testng
• Parallel and thread-count

10.Maven

• Maven project
• Maven Installation
• Maven Architecture
• Maven Terminologies and POM.xml
• Maven Commands
• Surefire plugin
• Integrating maven with TestNg
• Profile switching

11.Working with AutoIT

• AutoIT Installation
• Integration with Selenium

12. Jenkins Integration

• Jenkins CI Took
• Jenkins Installation

• Jenkins Scheduling
• Jenkins Plugins working

13. Extent Reports and Allure Reports
• Introduction to Extent Reports
• Creating an extent report
• Configuring reports
• Creating allure reports

14. Reading excel files
• Working with POI API
• Workbook, Sheets
• Reading Excel files

15. Working with log4j
• log4j Installation
• Working
• Integration with Selenium

16. Page Object Pattern and Page factory Model
• What is Page Object Pattern
• Working with Page Object Factory
• Factory Annotations

17. Reading and Writing to MySQL Database
• Installing MySQL Database
• Integrating project with databases

18. Version Controlling using GIT
• Introduction to Git and Github
• Repository, Clone, Commit
• Push, pull, merge

19. BDD framework and Cucumber
• What is BDD framework
• Features, StepDefinition
• TestRunner
• Cucumber Integration with Selenium

20. Project: Build A framework from Scratch
• Project including all the learning of the course into one

21.API Testing Tools

- SOAP UI & POSTMAN overview

22.Mobile App Test Automation using Appium(Overview)

23. Interview Preparation

• Tips& Tricks for interview cracking