Cognizant Academy

Generation Cognizant (GenC) Learner Handbook (SDET – v3)

Why do we need this GenC learning Program?

Gen C learning program engages young talents with a comprehensive learning pathway, giving the millennials an opportunity to interact with Subject Matter Experts (SME), understand the corporate environment, and groom themselves.

Cognizant emphasizes on Learner Autonomy where students take charge of their own learning, with the available tools and resources. More focus is on “learning” than “teaching”. Get ready to embark your own learning adventure!

Program at a glance

Learning consisting of 3 Stages:

- Stage 1 – Front end,Database and Java Programming Concepts
- Stage 2 – Configuration Tools, Framework and Functional Testing Concepts – Inclusive of the Project Interim Project Evaluation + Technical Evaluation
- Stage 3 – Selenium, Mobile Automation, Performance Testing and Tools Concepts – Inclusive of the Project Final Project Evaluation + Technical Evaluation

Program Highlights

- The complete learning journey is formalized using adult learning principles, where problem solving and applying the skills gained are given more importance than conceptual learning.
- Learner Autonomy is encouraged via Flipped Classroom, where the learning platform offers world class learning resources, and students would not be constrained by tutelage of an instructor.
- Get mentored by SME, whose motivation and guidance will help you accelerate in the learning journey.
- This program is applicable to Interns as well as GEN Cs.

Cognizant Quality Engineering & Assurance (QEA) focuses on ensuring the quality and reliability of enterprise processes, applications, and systems. QEA offers a comprehensive range of services including intelligent and automated quality assurance, modernization assurance, and experience assurance. These services are designed to accelerate business and technology changes, improve customer experiences, and ensure regulatory compliance. QEA also emphasizes the importance of automation and AI to enhance testing efficiency and deliver high-quality outcomes. By leveraging these advanced technologies, QEA helps businesses achieve digital success and maintain competitive advantage in the evolving digital landscape.

How QEA Transforms Quality Assurance at Cognizant?

Cognizant's Quality Engineering & Assurance (QEA) significantly transforms quality assurance by accelerating digital transformation and ensuring robust, reliable applications and systems. This seamless transition minimizes disruptions and speeds up technology adoption.

By embedding quality at every development stage, QEA enhances customer satisfaction and loyalty through high-performance, user-friendly products. Automation and AI-driven quality assurance streamline processes, reducing manual efforts and speeding up release cycles, which boosts operational efficiency and cuts costs. Rigorous testing and validation ensure compliance with industry regulations, crucial for sectors like healthcare and finance.

QEA also supports innovation by providing a reliable foundation for launching new products and entering new markets. Additionally, automated testing frees employees to focus on strategic tasks, enhancing productivity and job satisfaction. These combined impacts help businesses achieve strategic goals, maintain a competitive edge, and deliver exceptional value to their customers.

Notable & Successful Stories on Quality Assurance by QEA Cognizant Team…

Cognizant's Quality Engineering & Assurance (QEA) team partnered with a major health plan provider to overhaul their software quality assurance processes, addressing several critical challenges. The existing methods were outdated and inefficient, struggling to keep pace with the healthcare industry's evolving needs.

Ensuring compliance with stringent healthcare regulations was a significant concern, and the manual, fragmented processes led to delays and increased operational costs. Additionally, there was a pressing need to improve software quality to enhance patient care and overall service delivery.

QEA implemented automated testing frameworks and AI-driven quality assurance tools, significantly reducing manual efforts and accelerating the testing process. Rigorous testing and validation processes were established to ensure compliance with healthcare regulations, including continuous monitoring and real-time compliance checks.

By streamlining quality assurance processes and integrating advanced technologies, QEA improved the overall efficiency of the software development lifecycle.

The focus on quality from the start ensured that end products were reliable and user-friendly, leading to better patient care and satisfaction. As a result, the health plan provider saw a significant improvement in software quality and compliance, which was crucial for meeting healthcare regulations.

The enhancements in software quality directly contributed to better patient care and service delivery, while the automation and streamlined processes led to faster release cycles and reduced operational costs.

The time-to-market for software updates was significantly reduced, allowing the client to respond more quickly to market demands. This project exemplifies how Cognizant's QEA services can transform quality assurance processes, ensuring high-quality outcomes.

Health plan rebuilds software QA with Cognizant Case Study | Cognizant

Tips for Successfully Carrying Best Practices for Implementing and Maintaining Robust IT Infrastructure with QEA.

Understand the Basics: Start with a solid understanding of software development and testing fundamentals. Familiarize yourself with key concepts such as the software development lifecycle (SDLC), different types of testing (e.g., unit, integration, system, and acceptance testing), and the importance of quality assurance.

Learn Automation Tools: Gain proficiency in popular automation tools like Selenium, JUnit, and TestNG. Automation is crucial for efficient testing, and being skilled in these tools will enhance your ability to create reliable and repeatable tests.

Adopt the Page Object Model (POM): Use the Page Object Model design pattern to create maintainable and reusable code. This approach separates test logic from page elements, making your tests more organized and easier to manage.

Focus on Continuous Integration/Continuous Deployment (CI/CD): Understand and implement CI/CD practices. Tools like Jenkins help integrate testing into the development pipeline, ensuring that code changes are tested continuously and deployed seamlessly.

Embrace Agile and DevOps Practices: Agile and DevOps methodologies promote collaboration, speed, and quality. Learn how to work in these environments, focusing on continuous improvement and adaptability.

Prioritize Test Coverage: Develop comprehensive test plans that cover all aspects of the application, including functional, performance, security, and usability testing. Ensure that your tests are thorough and cover various scenarios.

Leverage AI and Machine Learning: Explore how AI and machine learning can enhance testing processes. These technologies can help predict potential issues, optimize test cases, and improve the overall effectiveness of quality assurance.

Implement Data-Driven Testing: Use data-driven testing to run the same test with different sets of data. This approach increases test coverage and ensures that your application works correctly with various inputs.

Maximize Browser Window: Ensure that your tests maximize the browser window to capture full-page screenshots and interact with all elements. This practice helps improve test accuracy and reliability.

Validate with Assertions: Use assertions to validate the outcomes of your tests. Assertions help ensure that the application behaves as expected and quickly identify any issues.

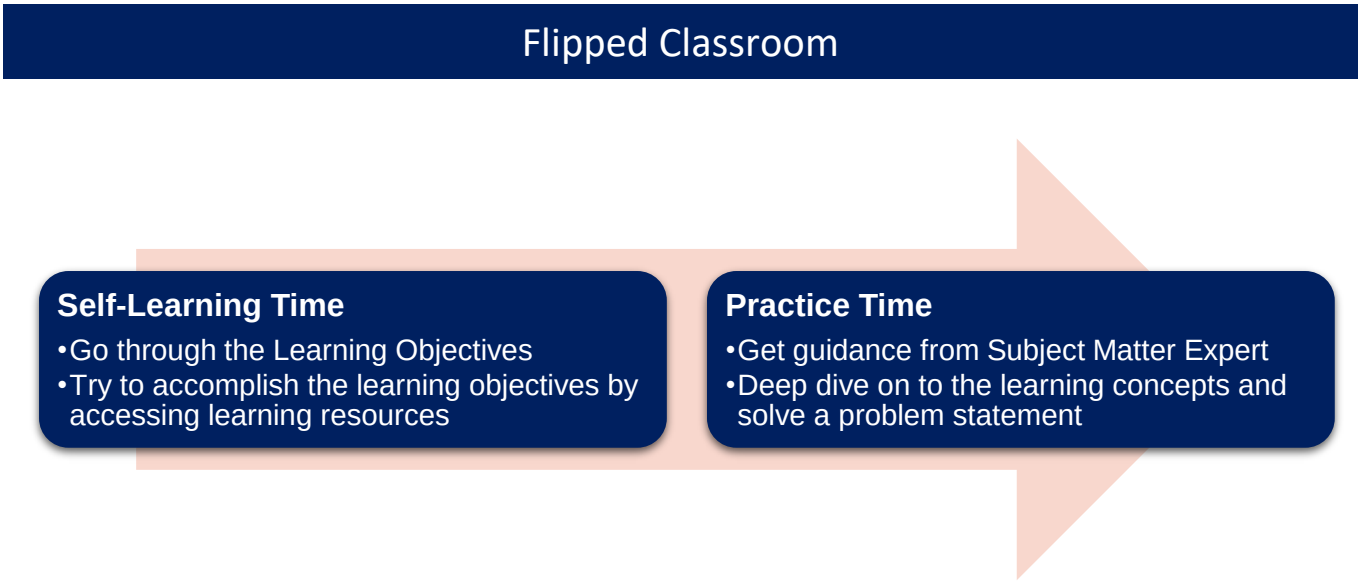
Continuous Learning and Improvement: Stay updated with the latest trends, tools, and best practices in quality assurance. Participate in training sessions, workshops, and online courses to continuously enhance your skills.

Collaborate and Communicate: Foster strong communication and collaboration with development, testing, and operations teams. Quality assurance is a shared responsibility, and effective teamwork is essential for success.

Learning Journey with Flipped Classroom

This program encourages you to be more autonomous learners during guided self-learning hours, completing the learning objectives on your own pace and style, and get ready for the hands-on practice time.

The complete learning path is set in the GEN C Learn Platform, which you can login with SSO.



Recommended Program Sequence

The learning journey contains 2 stages, followed by a Business Aligned Project.

- Stage 1 – Front end ,Database and Java Programming Concepts
- Stage 2 – Configuration Tools, Framework and Functional Testing Concepts
- Business Aligned Project will provide you an experience of real time problem solving in Agile methodology. Interim Project Evaluation + Technical Evaluation
- Stage 3 – Selenium, Mobile Automation, Performance Testing and Tools Concepts – Inclusive of the Project. Final Project Evaluation + Technical Evaluation

Stage 1 – Front end, Database and Java Programming Concepts

Day 1 to 5	Day 6 to 9	Day 10 & 20
• Front End-HTML, CSS, Javascript • Database - SQL	• Database - SQL • Code Challenge (CC) Assessment	• Java programming with Datastructures Algorithm • Stage 1 Mock Assessment • **Stage 1 Assessment**

Stage 2 – Configuration Tools, Framework and Functional Testing Concepts

Day 21 to 27	Day 28 to 35	Day 36 to 40	Day 41 to 43	Day 44 to 45
• Configuration Tools - Maven	• Framework - Spring	• Framework - Angular JS(Front-end)	• Methodology - Functional Testing Agile Scrum	• **Interim Project Evaluation(Mini) + Technical Evaluation**

Stage 3 – Selenium, Mobile Automation, Performance Testing and Tools Concepts

Day 46 to 57	Day 58 to 63	Day 64 to 75
• Version Control & Build Tool - GitHub • Ui Selenium Concepts	• Mobile Automation & API Automation	• Perf Testing - Jmeter/ loadrunner • CI Tools and Devops Tools • BDD,Accessibility Testing,Security Testing,Cloud Service • **Final Project(Hackathon Evaluation + Final Technical Evaluation**

Key Learning Components of the Program

Cognizant has collaborated with Udemy to provide world class learning videos for the evolving future of work. These Udemy programs are woven into a learning path, empowering you to plan and learn at your style.

The program also connects you with Subject Matter Experts (SMEs) to get the professional guidance on your queries in the learning journey.

The program doesn't ONLY concentrate on the technical skilling, but also on the shaping up of the Behavioral skills. **Behavioral learning** would be done in ILT mode, with few Self-paced learning modules too.

Evaluation Model

The program continuously evaluates if you can apply those self-learnt skills to solve a real-time business problem. Depicted below are the four key learning components, which are distributed across the learning journey for the purpose of continuous evaluation.

- Interim Evaluation (Project + Technical) through Video Interview
- Final Evaluation (Project + Technical) through Video Interview

The above evaluation components will attribute to the Performance Health Status (PHS) of a GenC. Additional Learning Components like Hands-On, Code Challenges and ICTs will help you to enhance your expertise level.

Interim & Final Evaluation Approach

Below is the Evaluation Structure for GenC Learning Journey

The interim evaluation will be held halfway through the learning journey, while the final evaluation will take place at the end of the learning journey.

During the interim evaluation, the GenC will be interviewed by a Technical Subject Matter Expert (SME) from the Business Unit (BU) to assess your knowledge through a technical discussion. Additionally, the Mini project completed by the GenC will also be evaluated by the BU SME. Please note that the Mini project is an individual activity and not a group activity.

During the final evaluation, the GenC will again be interviewed by a Technical SME from the BU to assess their knowledge through a technical discussion. In the same evaluation call, the Hackathon project completed by each group will be evaluated by the BU SME. Please note that the Hackathon project is a group activity and not an individual activity.

Preparatory Learning

For this automation track training, here are some preparatory learning materials that can be helpful for the interim and final technical evaluations. Preparatory learning material refers to resources, materials, and content that you can use to prepare. These materials are designed to provide you with the necessary knowledge, skills, and understanding to succeed in your learning objectives.

Remember, apart from these learning materials, actively participating in the training sessions, asking question and practicing hands-on exercises will greatly contribute to your overall learning and preparedness for the evaluations.

Program Completion Criteria

Stage 1 (Pre-requisites)

Gating Criteria: Qualifier Assessment

Stage 2 & Beyond (Advanced Skills)

Gating Criteria: Performance Health Status is Green

GenC/Intern Training	Evaluation Components	Pass Criteria	Evaluation Done by
Performance Health Status - PHS (only from Stage 2)	Interim Evaluation (Project + Technical)	Green,1 Attempt	BU SME
	Final Evaluation (Project + Technical)	Green,2 Attempts*	

Outcome of Interim / Final evaluation will be RED, AMBER or GREEN status

Note: 100% Completion of Hands On in Stage 1 is mandatory for qualifier assessment and 100% Completion of Hands On in Stage 2 is mandatory for interim / final evaluation eligibility.

Key Check Point Intervals in the Learning Journey

Progressing to Stage 2 depends on clearing the qualifier assessment after stage1. Candidates who do not clear the Stage 1 Qualifier will be terminated from the Internship. However, based on the demand and later needs, they will be considered for the CSD mode of training.

For ICT Assessments – These ICT are set as practice assessments. Duration is 4 hours, and Attempts provided for user to practice the assessment is 3.

For CC Assessments – These CC are set as practice assessments. Duration is 2 hours, and Attempts provided for user to practice the assessment is 3.

Subsequent stages learning journey, your progress will be measured. On the below check point intervals, your overall Performance Health Score will be calculated as on date, and the RAG status will be arrived.

Table - Check Point Intervals

Check points	Interpreting Status
Interim Evaluation	- Green - On Track for Graduation - Red /Amber - There will not be any re-attempts given
Final Evaluation	- Green - On Track for Graduation - Red /Amber – Only 2 attempts are given - (Attempt 2 is not applicable if the student is **Red** in Interim and Final Evaluation- Attempt 1) **Note:** If student fails after the applicable re-attempts, they will be considered as “Not-Graduated”.

Icebreaker

Icebreaker session will be conducted for a duration of initial **5 days.** During the session, various topics related to Corporate Induction, Talent Management, Cognizant Agenda on Core Values, Leader Talks, Alumni, BU Mentor connects will be covered. Followed by icebreaker, technical training will kick start.

Following sessions will be covered during the **5 days** of icebreaker

- Corporate Induction
- Talent Manager Connect
- Cognizant Agenda Sessions on Core Values
- Leader Talks (Academy) and many more…

A recommended day-wise schedule is provided below for the learning, with the learning content for the day, the practice hands-on and extended hands-on to be done for the day or

any other activities are listed. Few days might be interleaved to accommodate the extension due to Behavioral Training.

Mock Interview Session: This session is conducted to test candidate understanding and enhance candidates' best preparation for Interim & Final Evaluations.

GenAI-Program Overview

Introduction

AI Accelerate is a comprehensive program designed to empower learners with the knowledge and skills needed to harness the transformative potential of Artificial Intelligence (AI). This handbook serves as a guide, providing essential information and resources to help learners navigate through the program successfully. From understanding the fundamentals of AI to apply the advanced concepts in real-world scenarios. AI Accelerate is your gateway to unlock the power of AI and shaping the future of technology.

Program overview.

AI Accelerate offers a learning opportunity, allowing GenCs to engage learning through the self-paced learning, Expert connect, and Knowledge assessment to measure the skills.

Focus areas

- **Learning:** GenCs will have access to curated content and resources that cover a wide range of topics related to AI, including best practices, and case studies. This learning aspect aims to deepen GenCs understanding of AI and its applications in various industries.
- **Expert connect:** GenCs will have the opportunity to connect with expert in the field of AI. This expert will provide guidance, support, and insights to help GenCs navigate their learning journey and gain valuable insights into the industry.

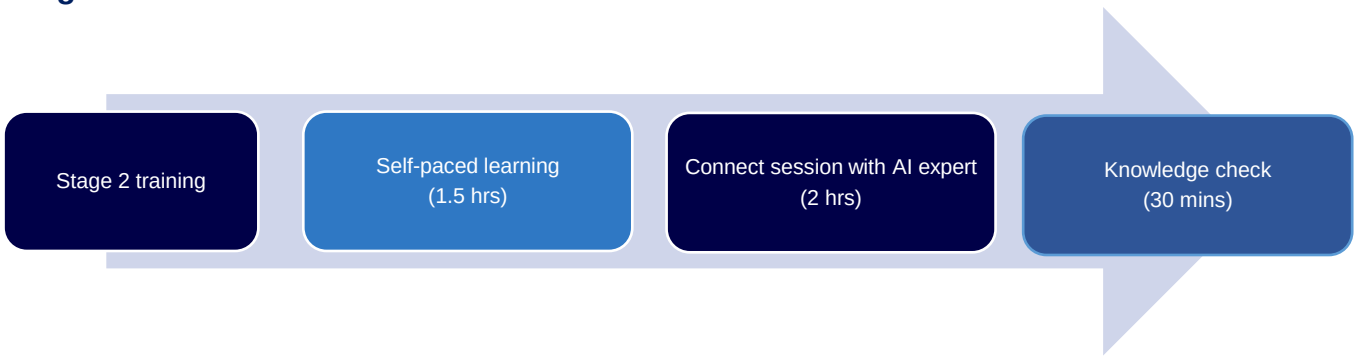
- **Practice sessions:** GenCs can practice the use cases provided sessions that are designed to reinforce their learning and help them apply their knowledge in real-world scenarios. These sessions will provide GenCs with hands-on experience and practical skills that are essential for success in the field of AI.

Performance outcomes

Upon completing the self-paced learning component of AI Accelerate GenCs are expected to achieve the following performance outcomes:

- GenCs will demonstrate a thorough understanding of the fundamentals of AI, including key concepts, terminology, and principles.
- GenCs will be able to apply AI concepts and techniques to solve real-world problems, demonstrating their ability to analyze, design, and implement AI solutions.
- GenCs will develop and apply critical thinking and problem-solving skills in the context of AI, enabling them to identify, analyze, and address complex challenges.
- GenCs will collaborate effectively with peers, mentors, and industry experts to achieve common goals and contribute to the advancement of AI knowledge and practice.

Program workflow



Schedule – Stage 1 – Day 1 to 5

Day 1 to 5

Front End - HTML, CSS, JavaScript

Day 1 to 5 will be focusing on Front End - HTML, CSS, Javascript

Continuous Learning: ILT Enablement

Learn and Practice

Web Development Concepts for Everyone

Ignore the sessions Web Developer Tools, Cloud Platform and Databases. Refer all other Sessions and complete the Corresponding Learnings.

The Web Developer Bootcamp 2025

Refer the sections 1 to 23 in this Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on – HTML

- Newberry Library
- Jasper Sports Academy

Mandatory Hands-on – CSS

- Whatsapp Chat
- Calculator
- 4*4 Sudoku

Mandatory Hands-on – JavaScript

- Schedule Upcoming Match
- Event Reservation Portal
- SignUp Form validation
- Fitness Centre
- Product Code Validation
- Display Student Details
- Counting Game

NOTE: On DAY 5 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **HTML5 and CSS3** -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge - HTML5 and CSS3

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 6 to 9

SQL

Day 6 to 9 will be focusing on SQL

Continuous Learning: ILT Enablement

Learn and Practice

EssentialSQL: Data Modeling & Relational Data Architecture

Refer all section in this Udemy course and complete the corresponding learnings.

The Ultimate MySQL Bootcamp: Go from SQL Beginner to Expert

Refer all section in this Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on – DDL

- Create Borrowing Table
- Alter Table User
- Alter Table Book
- Remove Table

Mandatory Hands-on – DML

- Insert User Table
- Update Record
- Delete Record

Mandatory Hands-on – SELECT STATEMENT

- Diverse Selection
- Email Providers
- Book Event
- Upcoming Fair
- Routine Checks
- Security Measure
- May Birthday
- Age Demographics
- Author Detail
- Price Analysis
- Updated Email

Mandatory Hands-on – AGGREGATE FUNCTIONS

- Lended Books
- The Chronicles of Authors and Their Tales

Mandatory Hands-on – JOINS AND SUBQUERIES

- Exploring Users' Literary Journeys
- Date Format
- Active Borrowings with User and Book Details
- Maximum Fine Per User
- Same Authors
- Top Users
- User Borrowing Summary
- User Count by Title and Author

NOTE : On DAY 6 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **Java Script** -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge – Java Script

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

NOTE: On DAY 9 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **SQL** -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge - RDBMS Select Statements

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 10 to 16

Java programming

Day 10 to 16 will be focusing on Core Java.

Udemy learnings are recommended in the Platform to understand the fundamental concepts. Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Day 10

Chapter	Chapter Name	Topic
Chapter-1	**Introduction to Java,Data Types and Variables**	**History & Features of Java:** OOP, platform independence, JVM, JDK, JRE
		Data Types: Primitive and non-primitive types, Variable declaration, Type casting
Chapter-2	**OOP Basics**	**Object-Oriented Principles:** Encapsulation, Inheritance, Polymorphism, Abstraction
		Classes and Objects: Class structure, Object creation, Instance variables
		Constructors: Default constructor, Parameterized constructor, Constructor overloading

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Streamline Your Health Journey
- Water Tank Capacity
- Square Series
- Automate Sum Finder

Continuous Learning: Java Practice Hands-on in Eclipse

Basic Syntax

- Simple Java program
- Print an integer value
- Command line arguments
- Print the input from scanner

Object Oriented Programming

- Object Oriented Programming
- Constructors
- Abstract Classes
- Interfaces
- Static Members
- Final Keyword
- Miscellaneous
- Factorial of a number using recursion
- Find the factorial of a given number
- See the output as 0, 1, 1, 2, 3
- Find the biggest number among 1,2,3,4,5,65,76,5,4,33,4,34,232,3,2323
- Read and write a file
- Print the below output
- Print the triangle of numbers

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Java programming

Continuous Learning: ILT Enablement

Chapter	Chapter Name	Topic
Chapter-3	**Inheritance,Abstraction & Encapsulation**	**Inheritance:** Single inheritance, Multilevel inheritance, super keyword
		Polymorphism: Method overloading, Method overriding
		Abstraction: Abstract classes, Interfaces
		Encapsulation: Access modifiers (public, private, protected), Encapsulating data

Continuous Learning: Technical Enablement through Self-learning

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Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Number Crunch Challenge
- Middle Number Game
- WordZee
- Fishing competition
- Brilliant Restaurant
- Mass Of Rocket Component
- Investment Calculation
- Dazzle Closet
- Lego Builders

Continuous Learning: Java Practice Hands-on in Eclipse

Basic Arithmetic Operations

- Java program to swap two numbers
- Convert from Fahrenheit to Celsius
- Swap two numbers without using a third variable
- Java program to add two numbers
- Java program to find the GCD of two numbers
- Java program to find the LCM of two numbers
- Java program to print the sum of digits of a number

Learn and Practice

 [Java 17 Masterclass: Start Coding in 2024]

Refer all section in this Udemy course and complete the corresponding learnings.

Continuous Learning: ILT Enablement

Chapter	Chapter Name	Topic
Chapter-4	**Keywords**	**Static Members:** Static variables, Static methods, Static blocks
		this and super: Referring current object, Accessing parent class methods
		final Keyword: Final variables, Final methods, Final classes
Chapter-5	**Arrays,Strings,StringBuffer & StringBuilder**	**Arrays:** One-dimensional array, Multidimensional array, Array traversal and operations
		Strings: String class, Immutability, String methods: length, substring, equals, etc.
		StringBuffer & StringBuilder: Mutability, Common methods: append, insert, delete

Continuous Learning: Technical Enablement through Self-learning

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Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Plan Smart
- Mythic Rhythms
- Fitness Tracker
- Array Aggregate
- Product Details
- Parse the Dates

Continuous Learning: Java Practice Hands-on in Eclipse

Control Flow Statements

- Demonstrate if…else statement
- Demonstrate nested if…else if… statement
- Demonstrate nested if…else statement
- Find odd and even numbers
- Printing the prime numbers
- Check whether a given number is Armstrong
- Check if a number is prime
- Check if a number is a palindrome
- Check if a number is an Armstrong number

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

NOTE: On DAY 10 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **SQL** -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge - RDBMS DDL & DML

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No of Questions appear in each attempt: 1

Day 11

Java programming

Continuous Learning: ILT Enablement

Chapter	Chapter Name	Topic
Chapter-5	**Arrays,Strings,StringBuffer & StringBuilder**	**StringBuffer & StringBuilder:** Mutability, Common methods: append, insert, delete
Chapter-6	**Exception Handling**	**Types of Exceptions:** Checked exceptions, Unchecked exceptions
		try-catch Block: Single try-catch, Multiple catch, finally block
		throw and throws: Manually throwing exceptions, Propagating exceptions

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

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Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Babitha's App
- Alta Motors
- Concept And Implementation
- College Namelist
- Student Score Info
- Vintage Books Emporium
- Animalia

Continuous Learning: Java Practice Hands-on in Eclipse

Loops

- Demonstrate for loop
- Print stars using for loop, where the number of stars printed should be equal to the row number
- Demonstrate while loop
- Print the entered number in reverse
- Demonstrate the usage of break statement inside while loop
- Print the alphabets using for loop
- Demonstrate the usage of break and continue statements inside while loop
- Demonstrate for each loop
- Print Floyd's triangle
- Print Pascal's triangle
- Print the Fibonacci series
- Printing the Multiplication table
- Find the factorial of a number
- Print the prime numbers up to a given number
- Calculate the power of a number using a while loop
- Verify whether a number is a perfect number or not
- Printing the Fibonacci series from 1 to 10
- Find the greatest of three numbers
- Print the largest two numbers from an array of given numbers

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Additional Learning:
Technical Quizzes:

- Java Operator, Control flow statement

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter-6	**Exception Handling**	**Custom Exceptions:** Creating custom exceptions
Chapter-7	**Java Collections**	**Introduction to Collections:** Collection hierarchy, Collection interfaces (List, Set, Map)
		List Interface: ArrayList, LinkedList, Vector, Stack

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

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2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Minimum And Maximum Salary- Teeing Collector (Java 12)
- Fit Freak
- Employee Details
- Customer Record
- Booking System
- Copy Names
- Train Platform allocation - File operations (Java 11)
- Mystic Line
- Area And Volume

Continuous Learning: Java Practice Hands-on in Eclipse

Method Overloading and Overriding

- Final methods be overloaded
- Static methods be overloaded
- Final methods be overridden
- Static methods be overridden
- Overload a main method in Java
- Object u have created

POLYMORPHISM & INHERITANCE

- Demonstrate method overloading
- Demonstrate method overriding
- Demonstrate inheritance
- Demonstrate the use of the ‘super’ keyword

Learn and Practice

[Java 17 Masterclass: Start Coding in 2024]

Refer all section in this Udemy course and complete the corresponding learnings.

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Assess-Type-1: Code Challenge - Function, Scalar & Aggregate

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 12

Java programming

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter-7	**Java Collections**	**Set Interface:** HashSet, LinkedHashSet, TreeSet
		Map Interface: HashMap, LinkedHashMap, TreeMap, Hashtable
		Iterator: Iterator, ListIterator

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Java Practice Hands-on in Eclipse

Arrays

- Find the largest number
- Remove duplicates from an array
- Find the second largest number in an array?
- Sort an array using bubble sort

- Sort an array using selection sort
- Sort an array using insertion sort
- Implement binary search
- Implement linear search
- Find the sum of elements in an array
- Find the average of elements in an array
- Find the maximum and minimum elements in an array
- Remove duplicates from an array
- Find the second largest number in an array
- Sort an array using bubble sort
- Sort an array using selection sort
- Sort an array using insertion sort
- Implement binary search
- Implement linear search
- Find the sum of elements in an array
- Find the average of elements in an array
- Find duplicate elements in a Java Array
- Find the smallest and largest numbers in a Java Array
- Java program to swap two strings without using temp or third variable
- Demonstrate creating an array
- Duplicate elements in an array of numbers
- Demonstrate creating a multidimensional array
- Print the elements of the array in reverse
- Print alternative elements in a String array
- Find the greatest number in an integer array
- Find the least number in an integer array
- Using a for loop with single-dimensional arrays
- Using a for-each loop with single-dimensional arrays

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Additional Learning:

Serial and Parallel Sorts in Java

- https://www.geeksforgeeks.org/serial-sort-vs-parallel-sort-java/

Streams and Optional

- https://www.geeksforgeeks.org/java-8-stream-tutorial/?ref=lbp

NOTE: On DAY 12 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **SQL** -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge - Functions & Subqueries

Assessment Duration: 2 hrs.
Assessment Attempts: 3

No.of Questions appear in each attempt: 1

Day 13

Java programming

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter-7	**Java Collections**	**Comparable & Comparator:** Sorting with Comparable, Sorting with Comparator
Chapter-8	**Java Thread Handling**	**Introduction to Threads:** Thread vs Process, Thread lifecycle
		Creating Threads: Extending Thread class, Implementing Runnable interface
		Thread Methods: sleep(), join(), start(), run()
Chapter-9	**Java File Handling**	**Character Streams:** FileReader, FileWriter, BufferedReader, BufferedWriter

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Technical Hands-on through Tekstac
Mandatory Hands-on

- The Perfect Password
- Library Management
- Crack the Code - String Methods (Java 11)
- Eden Botanical Garden - String Methods (Java 12)

Continuous Learning: Java Practice Hands-on in Eclipse

<u>String Handling</u>

- Java program to compare two strings
- Java program to reverse a string
- Java program to count the number of vowels and consonants in a string
- Java program to find the frequency of characters in a string
- Java program to reverse a string
- Java program to check if two strings are anagrams
- Java program to count the number of vowels and consonants in a string
- Java program to find the frequency of characters in a string
- A string such that the first character is uppercase, the second is lowercase, and so on the numbers from a string and print only the alphabets
- Reverse the words in a sentence

- The frequency of words in a paragraph

Learn and Practice

[Java 17 Masterclass: Start Coding in 2024]

Refer all section in this Udemy course and complete the corresponding learnings.

Java programming

Continuous Learning: Technical Enablement

Chapter	Chapter Name	Topic
Chapter-9	**Java File Handling**	**File Handling:** File class, File reading and writing (FileInputStream, FileOutputStream)
Chapter-10	**JDBC (Java Database Connectivity)**	**JDBC API Overview:** JDBC architecture, Driver Manager, Statement and PreparedStatement
		CRUD Operations: Insert, Update, Delete, Select Queries
		Transactions: Commit, Rollback, Savepoints

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Java Practice Hands-on in Eclipse

Exception Handling

- Demonstrate exception handling using try-catch
- Demonstrate the use of finally block
- Demonstrate the use of throw and throws
- Demonstrate custom exceptions
- Demonstrate the advantage of finally in Exception Handling
- Custom class which is immutable

Day 14

Java programming

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter-11	**Java 8 Features**	**Lambda Expressions:** Lambda syntax, Functional interfaces
		Stream API: Stream operations (filter, map, reduce)
		Optional Class: Avoiding NullPointerException with Optional
Chapter-12	**Generics & Annotations**	**Generics:** Generic classes, methods & wildcards
		Annotations: Built-in annotations (@Override, @Deprecated) & Custom annotations

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Java Practice Hands-on in Eclipse

Collections Framework

- Java program to demonstrate the use of collections (ArrayList)
- Java program to demonstrate the use of collections (HashMap)
- Java program to demonstrate the use of collections (HashSet)
- Java program to demonstrate the use of collections (LinkedList)
- Java program to demonstrate the use of collections (TreeSet)
- Java program to demonstrate the use of collections (PriorityQueue)
- Java program to demonstrate the use of collections (Stack)
- Java program to demonstrate the use of collections (Vector)

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Java programming

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter-12	**Generics & Annotations**	**Annotations:** Built-in annotations (@Override, @Deprecated) & Custom annotations
Chapter-13	**Design Patterns**	**Design Patterns:** Singleton, Factory, Observer, Strategy patterns

Continuous Learning: Technical Enablement through Self-learning

After completing each chapter of the ILT (Instructor-Led Training), trainees should:

1. Practice the mandatory hands-on exercises on the Tekstac platform.
2. Work on the provided hands-on exercises in Eclipse.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This approach ensures comprehensive understanding and reinforcement of the topics.

Continuous Learning: Java Practice Hands-on in Eclipse

Collections Framework

- Java program to demonstrate the use of collections (Deque)
- Java program to demonstrate the use of collections (LinkedHashMap)
- Java program to demonstrate the use of collections (LinkedHashSet)
- Find duplicates in a list
- Two HashMaps for equality
- Creating an ArrayList
- Creating a LinkedList

- Creating a HashSet
- Creating a LinkedHashSet
- Creating a TreeSet
- Creating a PriorityQueue
- Creating a HashMap using the Map interface
- Creating a LinkedHashMap
- Creating a TreeMap

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Additional Learning:

Technical Quizzes:

- Applying Object Oriented Concepts in java

Day 15 & 16

Java programming

Continuous Learning: ILT Enablement

Learn and Practice

Java 17 Masterclass: Start Coding in 2024

Refer all section in this Udemy course and complete the corresponding learnings.

Additional Learning:
Technical Quizzes:

- Quiz 3 - Collections Framework
- Quiz 4 - Advanced Java Concepts

Note: On Day 15 and 16 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Java skill appear for the Java -Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge – Java - Group 1
Assess-Type-1: Code Challenge – Java - Group 2

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No of Questions appear in each attempt: 1

Schedule – Stage 1: Day 17 to 20

Day 17 To 20

Data structures and Algorithm

Day 17 to 20 will be focusing on Data Structure.

Udemy learnings are recommended in the Platform to understand the fundamental concepts. Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Continuous Learning: Technical Enablement

Problem Solving with Data Structures and Algorithms

NOTE: Parallel to Load runner concepts, please go through the below course and practice the given hands-on.

Continuous Learning: Reference Learning

Data Structures and Algorithms: Deep Dive Using Java

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Reversing a List
- Chocolate Boxes
- Singly Linked List
- Occurrences
- Credit Points – Queue
- Bank Ticketing System
- Stack Operation
- Scorecard - Queue

Continuous Learning: Reference Learning

- Rehearse the learnings based on need

Note: On Day 17 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Java skill appear for the Java -Skill Based ICT Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

GenC - QAQE-TECHNICAL-JAVA TRACK - CORE JAVA SKILL WAR - SKILL BASED ASSESSMENT [101-BASICS] -LAB_ATKJE072

Assessment Duration: 4 hrs.
Assessment Attempts: 3
No of Questions appear in each attempt: 1

Stage – 1 MOCK Assessment

Note: On Day 18 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Advanced Java and SQL skill appear for the **Mock** Stage 1 Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform. **Question Pattern – SBA Java, SBA SQL and KBA**.

Assessment Duration: 3 hrs.
Assessment Attempts: 3
SBA JAVA: 3 Questions
SBA SQL: 2 Questions
KBA : 16 Questions

Day 20 & Day 21

Once completing Udemy course, Learnings, all Handson & Practice assessments related to Advanced Java and SQL skill appear for the Stage 1 Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform. **Question Pattern – SBA Java, SBA SQL and KBA**. Score acquiring in 1st instance will be getting into consideration. There are no more attempts provided further.

Stage -1 Assessment

Assessment Duration: 3 hrs.
Assessment Attempts: 1
SBA JAVA: 3 Questions
SBA SQL: 2 Questions
KBA : 16 Questions

Schedule – Stage 2: Week 21 to 23

Udemy learnings are recommended in the Platform to understand the fundamental concepts. Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Day 21 To 23

Maven

SME Driven - Contents will be shared during training.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Build Web Application
- Compiling Executing Java using POM
- Junit With Maven
- Maven Directory Structure
- Maven Shade Plugin
- Capital Service
- Maven App to access External Service

GenAI (Day 24)

Continuous Learning: Technical Enablement

AI Accelerate

- **By this course you will complete GenAI self-pace learning , AI expert connect session and AI Knowledge check assessment.**

Program completion criteria

Everyone must register for the following e-learning course on **C-Learn** and complete a KBA assessment on Moodle to successfully finish this program.

Online learning: C-Learn

Activity Code: **ELRNG01863**

Fundamentals of Generative AI [101-Basics]

This AI course is designed to equip learners with:

- The foundational knowledge and skills required to harness the power of Generative AI.
- The ability to identify opportunities for innovation and implementation of AI within their organizations.
- The skills to drive organizations toward a future of enhanced creativity and competitive advantage using AI techniques.

GenAI

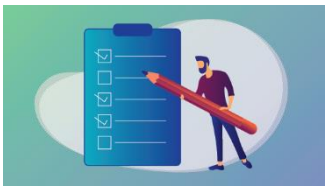
Additional Learning: Technical Enablement

Try to complete the following additional Udemy courses (Optional) to learn more about GenAI and ChatGPT.

Courses	Duration (in hrs.)	What you'll learn
Generative AI for Beginners	3.5	✓ Detailed understanding of Generative AI ✓ Key concepts - LLM, Embeddings, Prompt Engineering, Fine Tuning ✓ Industry use cases and ideas that can be implemented ✓ Hands-on experience, creating a chatbot ✓ Future trends and how to stay relevant in post-GenAI world. ✓ Roadmap for continuous learning
Intro to ChatGPT and Generative AI	1.5	✓ How to prompt ChatGPT effectively ✓ How to skyrocket productivity using AI ✓ Understand Generative AI and the underlying technology ✓ Grasp the importance of AI ethics

GenAI (Day 27)

Knowledge check - Moodle



GENERATIVE AI QUICK ASSESSMENT FOR ELEARNING QUIZ [101-BASICS]

- This assessment is to assess the knowledge of associates on Generative AI tools and concepts at a Beginner proficiency.

Activity Code: **ATHDW335105**

Schedule – Stage 2: Day 24 to 45

Day 24 to 35 will be focusing on Spring.

Udemy learnings are recommended in the Platform to understand the fundamental concepts.

Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Day 24 To 35

Spring Core

Continuous Learning: Technical Enablement

Learn the basics of Spring

Continuous Learning: Reference Learning

Spring Framework In Easy Steps
Spring Resource bundle with ResourceBundleMessage Source example

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Display Staff Details
- Display Book Details - Autowiring
- Gold Rate Calculation - Collections
- Shipment-Item-Scope
- Account-Loan
- DBConfig-SetterBasedInjection
- Azure Horizon Resort
- PatientManagement
- SpringAopDemo
- Billing Software Application
- EBill
- Loan Pro

Project– Mini Project Case Study

- Integrate your mini project and work on daily basis.

Spring Boot, Spring MVC

Continuous Learning: Technical Enablement

Learn the basics of Spring

Continuous Learning: Reference Learning

Spring MVC For Beginners - Build Java Web App in 25 Steps

Learn Spring Boot 3 in 100 Steps - No 1 Java Framework

Spring MVC Internationalization (i18n) and Localization

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Sports Academy
- Top Colleges List
- SignUp Form
- PulsePursuit Tournament
- Dexler Preschool
- SwiftCartPortal

Bootstrap

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Hi-Tech Digital world
- Ohm's Law
- Portfolio
- Sticky Notes
- Library Home Page

Day 36 To 40

Angular JS(Front-end)

Continuous Learning: Technical Enablement

Learn the basics of Angular JS

Continuous Learning: Reference Learning

Angular - The Complete Guide (2024 Edition)

Angular Testing Masterclass (Angular 19)

Objectives of Angular

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Stock securities-component
- Display Current Date and Time
- Share market-statistics
- One Spot Furniture -component
- Telecom-statistics
- Apple Inc. Market - state
- Stock Securities-Props
- Stock Securities-double and array props
- FunTimeTicket - PropTypes
- Quote For the Day - Event
- Tech Valley- Styles
- Stock Securities -Report- keys and styles-Final
- Style table using External CSS -Final
- Course Details with Form_Final
- Student Details using Map_Final
- Sort Applicants List_Final
- Search for Course availability
- Router- Final

NOTE: On DAY 36 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Frontend skill appear for the **SPRING Framework** - Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assess-Type-1: Code Challenge – SPRING Framework

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 41 To 43

Functional Testing & Jira Tool

Continuous Learning: Technical Enablement

Learn the basics of Software Testing Life Cycle

Learn Manual Software Testing + Agile with Jira Tool

Refer all section in this Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Hotel Booking
- Students Enquiry Form

Agile & Scrum

Continuous Learning: Reference Learning

Agile Fundamentals: Including Scrum & Kanban

Note: On Day 43 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Java skill appear for the Functional Testing -Skill Based ICT Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assessment Duration: 4 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 44 & 45

Interim Evaluation:
Interim Technical Evaluation

Schedule – Stage 3: Day 46 to 75

Business Aligned Project (Hackathon)

Hackathon Project – Objective

• CI/CD Integration: Integrating your Selenium tests with CI/CD tools like Jenkins helps

automate the testing process as part of the build pipeline.
• Automated Testing: Ensures that your application is tested automatically with every code change, improving software quality.
• Reporting and Logging: Generate detailed test reports that provide insights into test execution, pass/fail status, and error details.
• Logging: Implement logging to capture detailed information about test execution, which is useful for debugging and analysis.
• Reusable Code: Writing reusable and maintainable code is a key aspect of any project, and a mini project helps you practice this.
• Collaboration: It encourages collaboration and teamwork, as you can divide tasks among team members and integrate their work using Selenium.
• Exception Handling: You'll learn to handle exceptions and errors that occur during test execution, making your scripts more robust.
• Debugging Skills: Debugging skills are enhanced as you troubleshoot issues in your automation scripts etc.

Project Evaluation will be based on:

- Source Code
- Functionality Completion, Usage of Features, Code Quality
- Demo of Output

Note:

Hackathon is an individual activity. Project requirement is available in the platform. Candidates must complete the requirement and submit the solution for evaluations by BU SME.

Day 46 & Day 47

GitHub

Continuous Learning: Technical Enablement

Learn the basics of Spring

Continuous Learning: Reference Learning

The Git & Github Bootcamp

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Git Config
- Clone Repo
- Add, Commit And Push
- Pull And Merge
- Merge – Resolve Conflict
- Git Tags

Automation Concepts, Selenium configuration, WebDriver Basics

Click Here to View the BU Mandatory Technical Learning and Handson Document.

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 1	**Selenium Basics and overview**	Introduction to Browser Automation
		What is Selenium and Overview
		History and evolution of Selenium
		Selenium Components (WebDriver vs Selenium IDE vs Selenium Grid)
		Supported programming languages (Java, Python, C#, etc.)
		Cross-browser and cross-platform compatibility.
		Advantages and limitations of Selenium

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Refer to and learn the same topics covered by the trainer on Udemy.
2. Practice the Tekstac Platform Handson.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Find Element by Id
- Find Element by Name

Learn the basics of WebDriver Basics

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings

Section3: Selenium Web Driver

Automation Concepts, Selenium configuration, WebDriver Basics

Click Here to View the BU Mandatory Technical Learning and Handson Document.

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 2	**Selenium Architeture**	What is Selenium Webdriver: 1) WebDriver is one of the component in selenium. 2) WebDriver is a java interface. 3) WebDriver is an API(Application Programming interface)
		Understanding the WebDriver Architecture / API methods. WebDriver, RemoteWebDriver, ChromeDriver , FirefoxDriver, EdgeDriver etc..
Chapter 3	**Setting up Selenium environment**	Installing Java Development Kit (JDK) and Eclipse IDE
		Downloading Selenium WebDriver
		Configuring Selenium WebDriver with Eclipse

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning)hands-on exercises provided in the local environment.
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 2_Handson
- Chapter 2_PPT Learning Ref.Content
- Chapter 2_Video Learning Ref.Content
- Chapter 3_Handson
- Chapter 3_PPT Learning Ref.Content
- Chapter 3_Video Learning Ref.Content

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings

Section 3: Selenium WebDriver

Automation Concepts, Selenium configuration, WebDriver Basics

Continuous Learning: Technical Enablement

Chapter	Chapter Name	Topic
Chapter 4	**Selenium WebDriver**	Locating GUI Elements in Application Under Test (AUT)
		How to identify the locators in web page
		First Selenium Webdriver Script
		Launching Browsers in Selenium

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment Submit the solutions for evaluation.
3. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Find options in dropdown
- Find Radio Element

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 4_Handson
- Chapter 4_PPT Learning Ref.Content
- Chapter 4_Video Learning Ref.Content

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings

Section3: Selenium Web Driver

Automation Concepts, Selenium configuration, WebDriver Basics

Click Here to View the BU Mandatory Technical Learning and Handson Document.

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 5	**Locating various Web elements**	Find Element by Id,Name,Link Text,Partial Link Text,Class Name,CSS (Tag , ID , Class , Attribute , etc..)
		Handling Shadow DOM in Selenium

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Find Element by Tag Name
- Handling Check Box
- Find Element by Class Name
- LinkText and PartialLinkText

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 5_Handson
- Chapter 5_PPT Learning Ref.Content
- Chapter 5_Video Learning Ref.Content[Part-1]
- Chapter 5_Video Lear/ning Ref.Content[Part-2]
- Chapter 5_Video Learning Ref.Content[Part-3]

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings

Section3: Selenium Web Driver

Additional Learning:

Technical Quizzes:
Quiz 1 - Automation Concepts, Selenium configuration, WebDriver Basics

Automation Concepts, Selenium configuration, WebDriver Basics

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 5	**Locating various Web elements**	Relative Locators and Chained Locators in Selenium
		Locating By Xpath (Single Slash, Double Slash , contains(), starts_with() , text() , Last())

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Practice the Assessment.
5. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Learn the basics of WebDriver Basics

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings
Section3: Selenium Web Driver

Hackathon Project-Best Practice-Real Time Technical Project

- Integrate and work on daily basis in your Hackathon project

Note: On Day 50 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium-Web Driver skill appear for the Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Code Challenge
Assess-Type-1: Code Challenge - Automation Concepts, Selenium configuration, WebDriver Basics

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Day 51 To 52

Selenium Automation Techniques, Dynamic XPath

Click Here to View the BU Mandatory Technical Learning and Handson Document.

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 5	**Locating various Web elements**	Find Element by Id,Name,Link Text,Partial Link Text,Class Name,CSS (Tag , ID , Class , Attribute , etc..)
		Handling Shadow DOM in Selenium
		Relative Locators and Chained Locators in Selenium
		Locating By Xpath (Single Slash, Double Slash , contains(), starts_with() , text() , Last())
		Find options in dropdown. Handle dropdown without using Select Class
		Find Radio Element
		Find Element by Tag Name
Chapter 6	**Desired capabilities**	Desired Capabilities in Selenium WebDriver

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- CSSLocator
- AbsoluteXpathLocator
- xPathAncestor
- Working with Alerts
- Work with Javascript Excecutor

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 6_Handson
- Chapter 6_PPT Learning Ref.Content
- Chapter 6_Video Learning Ref.Content

Learn the basics of Automation Techniques and Dynamic Xpath

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings
Section3: Selenium Web Driver

Selenium Automation Techniques, Dynamic XPath

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 7	**selenium webDriver commands and Web elements interactions**	Selenium WebDriver- Commands
		Text fields and buttons
		Find Element VS FindElements in Selenium WebDriver - check order
		Handling Canvas Elements in Selenium
		Using JavaScript Executor in Selenium

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Handling RegEx Selenium
- Drag and Drop with Slider and Actions and wait
- Selenium – ScreenShot
- Selenium - DatePicker(Actions Class)
- FindElements

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 7_Handson
- Chapter 7_PPT Learning Ref.Content
- Chapter 7_Video Learning Ref.Content

Learn the basics of Automation Techniques and Dynamic Xpath

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings
Section3: Selenium Web Driver

Selenium Automation Techniques, Dynamic XPath

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 8	**WebDriver Actions**	Mouse and keyboard actions
		Drag and drop
		Handling frames and windows
		mouse hover (tool tip) in Selenium
		Handling tabs & cookies

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Handling ToolTip
- Working with different XPath conditions
- PurchaseApp iframe
- Multiple Window
- Selenium - Implicit Wait
- Selenium - Fluent Wait

Best Practices- Real Time Technical Hands-on

- Desired Capabilities
- Shadow_DOM_Scenario1
- Shadow_DOM_Scenario2
- Relative Locators and Chained Locators in Selenium

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 8_Handson
- Chapter 8_PPT Learning Ref.Content
- Chapter 8_Video Learning Ref.Content

Learn the basics of Automation Techniques and Dynamic Xpath

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings.
Section3: Selenium Web Driver

Selenium Automation Techniques, Dynamic XPath

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 9	**Multiple windows & frames**	Switching between windows
		Switching to frames & iFrames
	WebDriver Waits	Implicit waits
		Explicit waits
		Fluent waits

Chapter	Chapter Name	Topic
Chapter 10	**Selenium Automation Techniques**	Checkbox Handling and Form Submission
		Locating Web Element Attributes using CSS Selector
		Locating Web Element Attributes using Absolute XPath Locator
		Identifying Ancestors of Web Elements
		Working with alerts
		Working with Java script executor
		Working with Regular expression
		Working with Drag and Drop and Slider
Chapter 11	**Advanced WebDriver techniques**	Selenium - ScreenShot
		Handling JavaScript/window Alerts
		Headless browsers and drivers in Selenium
		Handling Dynamic Elements in Selenium
		1) get methods , 2) conditional methods, 3) browser methods, 4) navigational methods, 5) wait methods
		How to Find All/Broken links using Selenium Webdriver

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Take Up the Assessment.
5. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 9_Handson
- Chapter 9_PPT Learning Ref.Content
- Chapter 9_Video Learning Ref.Content
- Chapter 10_Handson
- Chapter 10_PPT Learning Ref.Content
- Chapter 10_Video Learning Ref.Content
- Chapter 11_Handson
- Chapter 11_PPT Learning Ref.Content
- Chapter 11_Video Learning Ref.Content

Continuous Learning: Technical Hands-on through Tekstac

Best Practices- Real Time Technical Hands-on

- Relative Locators and Chained Locators in Selenium_Scenario 1
- Relative Locators and Chained Locators in Selenium_Scenario 2
- Relative Locators and Chained Locators in Selenium_Scenario 3
- Relative Locators and Chained Locators in Selenium_Scenario 4

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings.

Section3: Selenium Web Driver

Additional Learning:

Technical Quizzes:
Quiz 1 - Selenium Automation Techniques, Dynamic Xpath

Hackathon Project-Best Practice-Real Time Technical Project

- Integrate and work on daily basis in your Hackathon project.

Day 53 To 54

You will be focusing on Selenium WebDriver with POM and ApachePOI

Udemy learnings are recommended in the Platform to understand the fundamental concepts. Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Selenium WebDriver with POM and Apache POI

Continuous Learning: ILT Technical Enablement

Continuous Learning: Technical Enablement through Self-learning

Chapter	Chapter Name	Topic
Chapter 12	**Calendar using action**	Selenium - DatePicker(Actions Class)
	Apache POI	Apache POI - Read Operation : Excel Read Operation
		Apache POI - Write Operation: Excel Write Operation
		Applying POI POM- Flight reservation

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment

3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Excel Read Operation
- Excel Write Operation
- Applying POI - Flight reservation

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 12_Handson
- Chapter 12_PPT Learning Ref.Content
- Chapter 12_Video Learning Ref.Content

Learn the basics of WebDriver with POM and ApachePOI

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings.

Section 4: Apache POI - Data Driven Testing using MS Excel

Project Deliverable (Hackathon Project)

The outcomes of doing **Hackathon** are:

- Explore the Innovative Implementations.
- Implement Best practices such as creating **Smoke and Regression suite**.
- Implement **Maven** on the created automation test scripts
- Explore **Jenkins** to execute the test scripts periodically on Selenium Grid.
- Explore Selenium **Grid** to run test scripts on different platforms and against different browsers.
- Integrate Jenkins with version controller (**GIT**) and scheduled builds to run automatically.

Selenium WebDriver with POM and Apache POI

Learn the basics of WebDriver with POM and Apache POI

Learn Selenium with Java, Cucumber & Frameworks

Refer section 4 in this Udemy course and complete the corresponding learnings.

Section 4: Apache POI - Data Driven Testing using MS Excel.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- POM with Page Factory Model

Continuous Learning: Technical Hands-on

Best Practices- Real Time Technical Hands-on

- Mouse_Keyboard_Actions_Cookie_Scenario 1
- Mouse_Keyboard_Actions_Cookie_Scenario 2
- Mouse_Keyboard_Actions_Cookie_Scenario 3
- Mouse_Keyboard_Actions_Cookie_Scenario 4
- Mouse_Keyboard_Actions_Cookie_Scenario 5
- Mouse_Keyboard_Actions_Cookie_Scenario 6
- Mouse_Keyboard_Actions_Cookie_Scenario 7

Selenium WebDriver with POM and Apache POI

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and Apache POI

Learn Selenium with Java, Cucumber & Frameworks

Refer section 3 to 13 in this Udemy course and complete the corresponding learnings.

Section 4: Apache POI - Data Driven Testing using MS Excel

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project.

Day 55 To 57

Selenium with TestNG

You will be focusing on Selenium with TestNG

Udemy learnings are recommended in the Platform to understand the fundamental concepts. Apply the concepts learned and solve the Hands-on and Practice Case studies as recommended below.

Click Here to View the BU Mandatory Technical Learning and Handson Document.

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 13	**TestNG Concepts**	TestNG Assertions
		Introduction to TestNG
		Creating TestNG test cases
		TestNG annotations and assertions
		Data-Driven Testing in TestNG
		Running Tests in Parallel using TestNG

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- TestNG Assertions
- TestNG with two test classes
- Contact Book- POM structure
- TestNG Annotation with Priority
- TestNG Dependency

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 13_Handson
- Chapter 13_PPT Learning Ref.Content
- Chapter 13_Video Learning Ref.Content

Learn the basics of Selenium with TestNG

Refer section 5,6,7 in this Udemy course and complete the corresponding learnings.

Section 5: TestNG Framework for Selenium

Section 6: Page Object Model

Section 7: Hybrid Driven Framework Development with Project (eCommerce Application)

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project .

Selenium with different DataSource

Continuous Learning: ILT Technical Enablement

Chapter	Chapter Name	Topic
Chapter 13	TestNG Concepts	Multi-browser testing using TestNG*
		Rerun failed tests*
		Set Test priority in TestNG
		Dependency in TestNG
		Soft /Hard Assertion in TestNG
		TestNG Report Generation in Selenium WebDriver*
		Customize, PDF & Email TestNG Reports in Selenium WebDriver*
	TestNG Class	TestNG with two test classes
	Data driven	Data driven from XML + POM : Contact Book- POM structure

Continuous Learning: Technical Enablement through Self-learning

After the Trainer-Led Master session on Selenium chapter topics, trainees should:

1. Practice Tekstac Platform Handson and Review respective BU Training Content chapter's PPT and video learning content.
2. Practice DLE (Daily Learning) hands-on exercises provided in the local environment
3. Submit the solutions for evaluation.
4. Refer to and learn the same topics covered by the trainer on Udemy.

This ensures a thorough understanding and application of the Selenium chapter topics.

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- Cargo Shipping
- Shopify Registration

- XMLParsing -1
- XMLParsing -2
- XMLParsing -3

Learn the basics of Selenium with Datasource XML Parsing (With XML & JSON)

Learn API Technical Writing: JSON and XML for Writers

Refer sections 1, 2, 3 and 4 in this Udemy course and complete the corresponding learnings.

Section 1: Introduction
Section 2: JSON
Section 3: XML
Section 4: Final Words

Rehearse the below Lend a hand enablement given in platform

- XMLParser_Enablement

Followed by refer “Lend-a-Hand” code template with solution

- XML Parsing

Note: On Day 55 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium – Xpath skill appear for the Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Code Challenge
Assess-Type-1: Code Challenge - Selenium Automation Techniques, Dynamic Xpath

Assessment Duration: 2 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt: 1

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project .

Selenium with different DataSource

Continuous Learning: Technical Enablement

Learn the basics of Selenium with Data source JSON Parsing (With XML & JSON)

Refer sections 1, 2, 3 and 4 in this Udemy course and complete the corresponding learnings.

Section 1: Introduction
Section 2: JSON
Section 3: XML
Section 4: Final Words

Rehearse the below Lend a hand enablement given in platform

- JSONParsing_Enablement

Followed by refer “Lend-a-Hand” code template with solution

- JSON Parsing
- JSON Solution Explanation

Continuous Learning: Technical Hands-on through Tekstac

Mandatory Hands-on

- JSONParsing – 1
- JSONParsing – 2
- JSONParsing – 3

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project.

Deliver your project and get the review comments from SME.

Day 58 to 60

Mobile Automation & API Automation - Appium

SME Driven - Contents will be shared during training.

Note: On Day 58 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium – Apache POI skill appear for the Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Code Challenge

Assess-Type-1: Code Challenge - Selenium Webdriver with POM and ApachePOI

Assessment Duration: 2 hrs.

Assessment Attempts: 3
No.of Questions appear in each attempt : 1

Note: On Day 60 - Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium – TestNG skill appear for the Code Challenge Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Code Challenge - Assess-Type-1: Code Challenge - Selenium with TestNG
Assessment Duration: 2 hrs.
Assessment Attempts: 3

Project – Hackathon

Integrate and work on daily basis in your Hackathon project

Day 61 To 63

Mobile Automation & API Automation- REST, SOAP & WSDL using tools, RESTASSURED

Continuous Learning: Reference Learning

WebServices/Rest API Testing with SoapUI +Real time Projects

POSTMAN API Testing - Step by Step for Beginners

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Testing REST Movie Service - SOAP UI
- Testing REST Passenger Service - SOAP UI
- Simple SOAP UI web services project with WSDL
- Simple SOAP UI web services project with WADL
- TeamPlayers
- Creation of new PostMan request with collection

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project .

No. of Questions appear in each attempt: 1

NOTE: **On Day 62**, Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium skill appear for the MOCK ICT Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Integrated Capability Test (ICT) - SELENIUM MOCK

Assessment Duration: 2 hrs.

Assessment Attempts: 1
No. of Questions appear in each attempt: 1

Day 64 To 68

JMeter/ LoadRunner

During this phase, you will deep-dive into about Performance Testing. SME will be sharing the content during the training.

Continuous Learning: Reference Learning

Performance Testing Foundations
Performance Testing Course with JMeter and Blazemeter

Project – Hackathon

- Integrate and work on daily basis in your Hackathon project.

Integrated Capability Test (ICT) - SELENIUM

SELENIUM Assess-Type-2: Integrated Capability Test (ICT)

NOTE: **On Day 64**, Once completing Udemy course, Learnings, all Handson & Practice assessments related to Selenium skill appear for the Selenium ICT Assessment. This will help you to assess and apply the concepts of the skill learnt in the platform.

Assessment Duration: 4 hrs.
Assessment Attempts: 3
No.of Questions appear in each attempt : 1

Day 69 to 72

Jenkins, Docker & Container

Jenkins

SME Driven - Contents will be shared during training.

BU Training Content - Chapter Wise [BU Mandatory Technical Learning and Handson]

- Chapter 17_Handson
- Chapter 17_PPT Learning Ref.Content

- Chapter 17_Video Learning Ref.Content[Part-1]
- Chapter 17_Video Learning Ref.Content[Part-2]
- Chapter 17_Video Learning Ref.Content[Part-3]
- Chapter 17_Video Learning Ref.Content[Part-4]
- Chapter 17_Video Learning Ref.Content[Part-5]
- Chapter 18_Handson
- Chapter 18_PPT Learning Ref.Content
- Chapter 19_Handson
- Chapter19_PPT Learning Ref.Content
- Chapter 21_Handson
- Chapter 21_PPT Learning Ref.Content
- Chapter 22_Handson
- Chapter 23_Handson
- Chapter 24_Handson

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Build project based on another project
- Build Maven Project (Using Freestyle Project)
- Pipeline - compile and test

Additional Hands-on

- Install Jenkins and Creation of new job

Docker & Container

Continuous Learning: Technical Enablement

Refer all the sections in the Udemy learning for Docker & Container

Docker - Introducing Docker Essentials, Containers, and more

Docker for the Absolute Beginner - Hands On - DevOps

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Project – Hackathon

- Integrate and work on daily basis in your Hackathon project .

Deliver your project and get the review comments from SME.

The deliverables of the Hackathon will be evaluated by the BU SME.
Project Evaluation will be based on:

- Source Code
- Functionality Completion, Usage of Features, Code Quality
- Demo of Output

NOTE: The following skills and contents should be learned in parallel during Stage 3. These courses are self-paced Learning and should be completed by the learner in their spare time, alongside other skills learning and must finished these by the end of Stage3.

Schedule – Stage 4

BDD, Accessibility Testing, Security Testing, Cloud Service

Module	Skill	Course Name	Course Link	Duration	Learning Mode	Skill Level
BDD	Cucumber	Learn Selenium with Java, Cucumber & Frameworks	https://cognizant.udemy.com/course/learn-selenium-with-java-live-project/learn/lecture/35017230#overview	5 Hrs	Self-Learning Refer Section 9 : Cucumber BDD Framework	Knowledge
Accessibility Testing	Axe	What is Accessibility Testing	https://www.guru99.com/accessibility-testing.html	1 Hr	Self-Learning	Knowledge
Security Testing	ZAP	What is Security Testing OWASP top 10 Web Application Security	https://www.guru99.com/what-is-security-testing.html https://cognizant.udemy.com/course/web-application-security-for-absolute-beginners-no-coding/learn/lecture/8084852#overview	3 hrs	Self-Learning	Knowledge

		for Absolute Beginners				
Cloud Service	Compute, Storage & DB	Cloud Computing Fundamentals	https://cognizant.udemy.com/course/welcome-to-cloud-computing-world/	3 Hrs	Self-Learning	Knowledge

Day 73 - 75

Evaluation:
Final Project Evaluation + Final Technical Evaluation

What is Final Evaluation?

The Final Evaluation will be conducted to certify whether a GenC is eligible to enter into the BU or not. The skill of a GenC will be gauged on the application development and overall technical knowhow towards the end of GenC Training.

Tech SME from BU will be conducting the final tech evaluation. As a fallback, the project mentor can also steer this activity.

The final evaluation will be conducted as two phases. They are the following:

1. **Final Technical Evaluation**
2. **Final Project Evaluation**

The mode of these evaluations will be any one of the following:

- F2F (face to face)
- Video Based

1. Final Technical Evaluation (FTE)

The BU Mentor will interview the GenC on various skills achieved throughout the training program and put a score which will be considered for the final PHS of the GenC.

2. Final Project Evaluation (FPE)

In this evaluation, the BU Mentor will be verifying the skills of a GenC on a project perspective. End of this evaluation, the BU Mentor will score the GenC's work based on various evaluation criterions.

How to learn each day?

Each day has a set of learning objectives. These learning objectives can be met by going through the Udemy courses and by completing the hands-on exercises mentioned in the daily plan.

The below strategies will help you decide the learning approach.

Learning Strategy & Approach

Find below few imaginary profiles. For each of these profiles we have defined a recommended learning approach. This is not an exhaustive list. The approaches below might help invent a new way of learning.

Profile #1

Harry Reacher

Engineering Discipline: Electronics

Skills: Python, Ruby on Rails, nginx

Project: Mining Crime Data to get Route Cause Insights

Learning Approach to Programming Languages: I do not want to waste my time learning. I am more practice oriented. I want to work on the problem immediately

What will work for me?

- Directly complete hands on exercises
- Refer Internet or Udemy Courses
- If hands on are implemented early, clarify your friends questions and troubleshoot their issues

Profile #2

Olivia Richards

Engineering Discipline: Computer Science

Skills: Java, C, C++

Project: Library Management System

Learning Approach to Programming Languages: I have interest, but I don't know where to start.

What will work for me?

- Go through the recommended Udemy Course

- Try completing the hands on exercises
- Get your clarifications solved with help from Tech SME
- Get help from other learners in your batch whom had already completed

Profile #3

Greg Anderson

Engineering Discipline: Civil

Skills: C

Project: Fiber reinforced concrete

Learning Approach to Programming Languages: I am scared of programming languages. I haven't got my hands dirty with coding

What will work for me?

- Go through the recommended Udemy Course
- Implement the coding along with the author of the Udemy Course
- Try completing the hands on exercises
- Clarify queries with SME
- Troubleshoot programming issues with help from SME or learner from your classroom whom had already completed

FAQ

1. Who can participate in this program?

   Students who have enrolled for Full Internship Program (or) the Cognizant on-boarded GEN Cs can participate in this program.

2. Is there any pre-learning I should do?

   No. This program is open to all students from any academic discipline.

3. How will I know my RAG status?

   It will be shown to you in the GEN C learn Platform, in your Home Page.

4. Whom do I reach out in case of any queries?

   Coach is your point of contact.

5. What is the significance of Hands-on in the overall learning journey?

   Hands-on focuses on specific topics in a Skill, which you can try and execute in the Platform. Group of such Hands-on exercises will be packaged together as a Code Challenge. This Code Challenge will allow you to benchmark your skills in the learning

journey. Hands On/ Code Challenges/ ICT are learning components which will help you in understanding the skills better.

6. What is Code Challenge?
   A problem statement will be provided to you and you need to solve it using a single skill.

7. What is Integrated Capability Test (ICT)?
   A case study problem statement will be provided to you, that you may need solve using the combination of Skills learnt in the given stage.

8. How many attempts are provided for the Coding challenge and ICTs? Is it open all the time for practice?
   The Coding challenges and ICTs are open and there are 3 attempts to take them up.

9. What is the entry criteria for qualifier?
   A minimum of 70% hands-on completion and attempt in the CC & ICT is the eligibility criteria for qualifier.

10. What skills are covered in the qualifier?
    The skills of Stage 1 are covered in the qualifier. Only ONE attempt is provided to clear with a minimum score of 70%

11. What if I fail in the Interim evaluation?
    Your coach will notify your performance in the Interim evaluation. However you can continue with the learning.
12. How many chances will I get in the Final evaluation?
    You'll get 2 chances in the Final evaluation which covers ALL the skills in the learning journey.

13. Whom do I reach out in case of any queries?
    Coach is your point of contact.