

Cognizant Academy

Generation Cognizant (GenC)

Learner Handbook

(SDET - v1)



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 2 Stages:

- Stage 1 – QEA Basics (6 weeks)
- Stage 2 – Selenium with Digital Technologies (10 weeks – Inclusive of the Project)
 - Business Aligned Project
 - Interim Project Evaluation + Technical Evaluation
 - Final Project Evaluation + Final 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.

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.

Flipped Classroom

Self-Learning Time

- Go through the Learning Objectives
- Try to accomplish the learning objectives by accessing learning resources

Practice Time

- Get guidance from Subject Matter Expert
- Deep dive on to the learning concepts and solve a problem statement

Recommended Program Sequence

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

- Stage 1 – QEA Basics
- Stage 2 – Selenium with SDET Technologies
- Business Aligned Project will provide you an experience of real time problem solving in Agile methodology.

Stage 1 – QEA Basics

Day 1 to 5

- Functional Testing
- Basics of Automation Concepts
- ICT (Integrated Capability Test) in Functional Testing

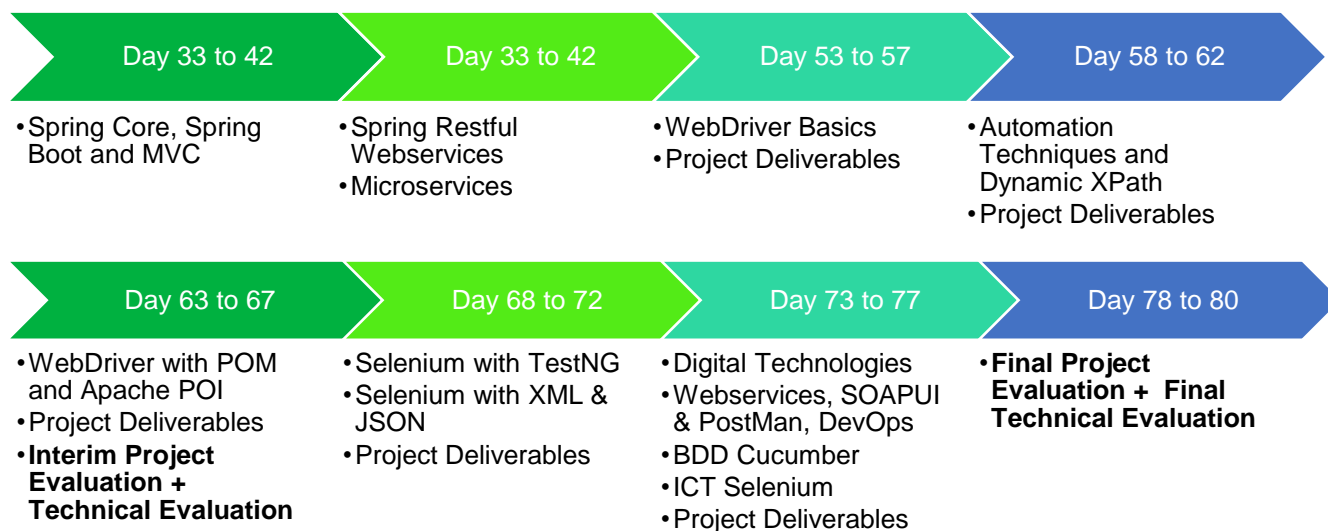
Day 6 to 15

- Programming with Java
- ICT (Integrated Capability Test) in Java Programming

Day 16 to 32

- WebUI
- JavaScript, BootStrap
- Data Source(SQL, XML, JSON)
- ICT (Integrated Capability Test) in SQL
- Qualifier Mock
- **Qualifier**

Stage 2 – Selenium with SDET Technologies



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 are able to 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.

The weightage of the Interim Evaluation will be 30%, while the Final Evaluation will account for 70%. However, the performance status of GenC will be indicated using the RAG (Red Amber Green) system. In this system, 'Green' signifies meeting the passing criteria, which is equal to or greater than 70%, the benchmark score for all evaluations.

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.

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 stage 1. 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.

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 1 attempt are given (Re-attempt is not applicable if the student is Red in Interim and Final Evaluation) Note: If student fails after the applicable re-attempts, they will be considered as “Not-Graduated”.

Icebreaker

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.



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.

Schedule – Stage 1: Day 1 to 5

Day 1 to 5 will be focusing on Functional Testing Fundamentals.

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 1

Functional Testing (Day1 -Day5)

Continuous Learning: Technical Enablement

Learn the basics of Agile Fundamentals and Software Testing Life Cycle



[Learn Manual Software Testing + Agile with Jira Tool](#)

Refer section 1 and 2 in this Udemy course and complete the corresponding learnings.

Section 1: Software Testing Introduction

What is Software?

Types of Software's?

What is Software Testing?

What is Software Quality?

Project Vs Product

Why do we need Testing?

Error, Bug & Failure Why the software has bugs?

Section 2: Software Testing Concepts

SDLC

Waterfall Model

Spiral Model

V-Model

Static Testing & Dynamic Testing

Verification & Validation

White Box & Black Box Testing Methods

Day 2

Functional Testing (Day1 -Day5)

Continuous Learning: Technical Enablement

Learn the basics of Software Testing Life Cycle



[Learn Manual Software Testing + Agile with Jira Tool](#)

Refer section 2 in this Udemy course and complete the corresponding learnings.

Section 2: Software Testing Concepts

Static Testing & Dynamic Testing

Review, Walkthrough & Inspection

QA & QC & QE

Levels of Software Testing

Unit Testing

Integration Testing

System Testing

UAT Testing

System Testing Types

GUI Testing

Usability Testing

Functional Testing

Non-Functional Testing

Regression testing

Re-Testing

Smoke & Sanity Testing

Exploratory Testing

Adhoc Testing

Monkey Testing

Positive & Negative Testing

End-To-End Testing

Localization & Globalization/Internationalization(I18N) testing

Functional Testing (Day1 -Day5)

Continuous Learning: Technical Enablement

Learn the basics of Software Testing Life Cycle



[Learn Manual Software Testing + Agile with Jira Tool](#)

Refer section 2 and 3 in this Udemy course and complete the corresponding learnings.

Section 2: Software Testing Concepts

Test Case Design Techniques

Equivalence Class Partitioning (ECP)

Boundary Value Analysis (BVA)

Decision Table

State Transition

Error Guessing

Section 3: Software Testing Life Cycle (STLC)

STLC

Test Planning

Test Design/Development

Test Execution

Defect Reporting & Tracking

Test Closure

Test Plan

Use Case Vs Test Scenario Vs Test Case

Test Case Template

RTM (Requirement Traceability Matrix)

Test Environment Setup & Test Execution

Defects/Bugs

Contents is Defect Report

Defect Classification (Severity & Priority)

Defect/Bug Life Cycle

Test Closure/When To Stop Testing?
Software Testing Metrics
QA/Testing Activities
Principles of Software Testing

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Hotel Booking

Deliverables Expected:

Deliverable 1: Identify four test scenarios for the mentioned requirement

Deliverable 2: Write all the test cases using the appropriate testing techniques wherever applicable

Deliverable 3: Log the below mentioned defects effectively with all the details, relating the requirement mentioned such that the developers would understand.

Day 4

Functional Testing (Day1 -Day5)

Continuous Learning: Technical Enablement

Learn the basics of Software Testing Life Cycle



[Learn Manual Software Testing + Agile with Jira Tool](#)

Refer section 4 and 5 in this Udemy course and complete the corresponding learnings.

Section 4: Software Testing Live Project (E-Commerce Domain)

Introduction to AUT, FRS, Creating Test Plan & Test Scenarios

Test Cases & RTM (Requirement Traceability Matrix)

Test Cases, Environment Setup(Test Bed) & Deploy Application

Test Execution & Defect Reporting

Section 5: Agile Testing Process and Working with Jira Tool

Agile Testing Process & Terminology

Working with Jira Tool

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Students Enquiry Form

Deliverables Expected:

Deliverable 1: Identify four test scenarios for the mentioned requirement.

Deliverable 2: Write all the test cases using the appropriate testing techniques wherever applicable.

Deliverable 3: Log the below mentioned defects effectively with all the details relating the requirement mentioned such that the developers would understand.

Additional Learning:

Technical Quizzes:

Functional Testing

Day 5

Functional Testing (Day1 -Day5)

Integrated Capability Test (ICT)

Functional Testing

Stage 1: Day 6 to 15

Day 6 to 15 will be focusing on Java Programming

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

Note: You'll find the hands-on and practice case study in the current learning path's module as per the names specified below.

Day 6

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Overview, First Java Program, Variables, Datatypes, Literals, Operators, Expressions and Conditional Statements.

Learn and Practice



[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 2 in this Udemy course and complete the corresponding learnings.

Section 2: Java Programming

Variables & Data Types in Java

Java Operators

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Highest Placement
- Display Characters
- Fuel Consumption Calculator

Additional Hands-on

- Bill Generation
- Movie Ticket Calculation

Day 7

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Overview, String, Arrays, Looping Statements, Methods, Class, Object, static.

Learn and Practice



[Learn Selenium with Java, Cucumber + Live Project.](#)

Section 2: Java Programming

Java Conditional Statements

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Least offer
- String Concatenation
- Ticket Price Calculation – Static
- Student Details - Constructor

Additional Hands-on

- Increment Calculation
- Find Average Age

Day 8

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Access Modifiers, Packages, Inheritance, Abstraction.

Learn and Practice



Go through below mentioned section and implement the examples along with the author.

[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 2 in this Udemy course and complete the corresponding learnings.

Section 2: Java Programming

Java Loops

Java Arrays

Working with Strings in Java

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Contact Details of Hosteller
- Account Manipulation - Abstract class

Additional Hands-on

- Shape - Area Volume Calculator
- Divide two numbers - Use finally

Day 9

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Learn and Practice



Go through below mentioned sections and implement the examples along with the author.

[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 2 in this Udemy course and complete the corresponding learnings.

Section 2: Java Programming

Java OOPS Concepts, Class, Object, Methods

Java Methods, Constructors, Polymorphism & Overloading

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- BankAccountDetails
- Employee Loan Eligibility – Polymorphism
- Vehicle-Loan-Insurance - Use Interface

Additional Learning:

Technical Quizzes:

- Quiz 1 - Java Operator, Control flow statement

Day 10

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Collection Framework, ArrayList, Map, Set.

Learn and Practice



[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 4 and 5 in this Udemy course and complete the corresponding learnings.

Section 2: Java Programming

Encapsulation, Setters & getters, static keyword

Java Inheritance, Overriding, super keyword

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Register a Candidate - User defined Exception(with throw and throws)
- Array Manipulation - Use try with multi catch
- Insurance Bazaar

Additional Hands-on

- Count of Each Words

Code Challenge:

Code Challenge - Group 1

Day 11

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Collection Framework, ArrayList, Map, Set.

Learn and Practice



[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 2 in this Udemy course and complete the corresponding learnings.

Section 2: Java Programming

Interface in Java, final keyword

Java packages, Access Modifier's & Wrapper classes

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Number of New Words
- Phone Book Manipulation

Additional Hands-on

- Book Manipulation

Day 12

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

File Handling, Annotation, Threads and Garbage Collections, Exception Handling, Enums.

Learn and Practice

Go through below mentioned sections and implement the examples along with the author.



[Learn Selenium with Java, Cucumber + Live Project.](#)

Refer section 4 and 5 in this Udemey course and complete the corresponding learnings.

Section 2: Java Programming

Exception Handling in Java
Java Collections

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Employee Promotion
- Retrieving Data from file

Additional Hands-on

- Visitors Details

Additional Learning:

Serial and Parallel Sorts in Java

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

Streams and Optionals

- <https://www.java2novice.com/java-8/streams/>
- <https://www.geeksforgeeks.org/java-8-optional-class/>

Technical Quizzes:

- Quiz 2 - Applying Object Oriented Concepts in java

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Learn and Practice



[Java In-Depth: Become a Complete Java Engineer!.](#)

Go through only below mentioned sections 16 & 17 and implement the examples along with the author

- Section 16: Collections Framework (aka Data Structures)
- Section 17: Generics

Java 8 Features - Streams and Optionals. Asynchronous and Parallel Programming in Java 8. Go through web pages for learning below specific topics

[Asynchronous and Parallel Programming](#)

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Employee Loan Eligibility
- Placement Enrollment Count
- Auditing

JDBC

Continuous Learning: Technical Enablement

Introduction, Connection, Statement, Prepared Statement, Callable Statement, Transactions and Meta Data.

Learn and Practice



[Java Database Connection: JDBC and MySQL.](#)

- Go through entire course.
- Implement the examples along with the author.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Add Flight using JDBC

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Mall Parking System
- Validate Name
- Travel Agency
- Fruit Basket Estimation

Additional Hands-on

- Participant List Manipulation
- College Account

Additional Learning:

Technical Quizzes:

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

Day 14

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

Introduction, Connection, Statement, Prepared Statement, Callable Statement, Transactions and Meta Data.

Learn and Practice

[Java Database Connection: JDBC and MySQL.](#)



- Go through entire course.
- Implement the examples along with the author.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Search for Trains – JDBC
- Player Selection System_JDBC

Additional Hands-on

- Retrieve customer count based on loan type_JDBC
- Retrieve ID and Price of mobiles with in the range_JDBC

Code Challenge: Code Challenge - Group 2

Day 15

Java Programming Fundamentals (Day 6 -Day15)

Continuous Learning: Technical Enablement

- Rehearse the sections based on need

Integrated Capability Test

Integrated Capability Test (ICT) - QAQE - JAVA ASSESSMENT

Schedule – Stage 1: Day 16 to 32

Day 16 to 30 will be focusing on **Milestone: Web UI, DataSource** which covers different skills such as HTML, Xpath, XML, Javascript and SQL concepts

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 16

Web UI, DataSource (Day 16 -Day 30)

Learn the basics of WebUI : HTML Basics

Continuous Learning: Technical Enablement



[Build Websites from Scratch with HTML & CSS](#)

Refer only sections 1, 2, 3, 4, 5, 6 & 7 to learn HTML fundamentals with CSS

Learn the basics of WebUI : XPath Basics



[Master XPath and CSS Selectors for Selenium WebDriver](#)

Refer section 1, 2, 3, 4 and 5 in this Udemy course and complete the corresponding learnings.

Section 1: Locating Elements

Section 2: XPath Basics

Section 3: XPath Axis

Section 4: CSS Selectors Basics

Section 5: CSS Selectors Advance

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- HTML-Xpath-condition: StudentRegistration
- HTML-Xpath: CommodityDetails2
- HTML-Xpath: CommodityDetails1

Day 17

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- HTML-Xpath-function: StudentRegistration
- HTML-Xpath: AddressBook
- HTML-Xpath: Cargo_Shipping_Cost
- HTML-Xpath: CSS selector
- HTML-Xpath: Label_PartialXpath

Day 18

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of XML and 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

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Well Formed XML - Employee Detail
- Well Formed XML - Department Details
- Well Formed XML - Department Details -2

Day 19

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of XML and JSON



[Learn API Technical Writing: JSON and XML for Writers](#)

Revisit the sections in this Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Well Formed XML - Hotel Information
- Well Formed XML - Multiple Department Details

XML & JSON

Code Challenge

Code Challenge 5 – XML

Day 20

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of WebUI: JavaScript Basics



[Accelerated JavaScript Training](#)

Refer sections 1 to 9 in this Udemy course and complete the corresponding learnings.

Section 1: Getting Started

Section 2: Language Basics

Section 3: Types & Scopes

Section 4: Arrays

Section 5: Objects

Section 6: Errors & Debugging

Section 7: Functions

Section 8: Built-in Objects & Functions

Section 9: Working with the Window and Document Object Model (DOM)

Schedule – Stage 1: Week 5

Day 21 & 22

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of WebUI: JavaScript Basics



[Accelerated JavaScript Training](#)

Based on need rehearse the sections in Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Asset Summary
- Customer Details
- Payment Information
- Total Expense
- Address Details
- User Details

Additional Learning:

Technical Quizzes:

Quiz 1 - Java script

Web UI - JavaScript

Code Challenge

Code Challenge 1 - Java script

Day 23

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of Bootstrap



[The Bootstrap 4 Bootcamp](#)

Learn the sections listed below in this Udemy course and complete the corresponding hands-on coding given below.

- Getting Started With Bootstrap 4
- Bootstrap 4 Basics
- Super Useful Utilities
- Forms

Implement the examples along with the author.

Continuous Learning: Technical Hands-on

Mandatory Hands-On:

- Contact US
- BS Feedback Form

Additional Hands-on

- Bootstrap Typography
- Bootstrap Panel

- Nested Containers

Additional learning:

[Beginner VS Code](#)



- Learn the sections listed below in this Udemy course to know how to use Visual studio code for Bootstrap practice

Note: You can use Visual studio code to practice Bootstrap hands-on on local machine

Day 24

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of Bootstrap



[The Bootstrap 4 Bootcamp](#)

Learn the sections listed below in this Udemy course and complete the corresponding hands-on coding given below.

- Navbars and Flexbox!
- The Magical Grid System
- Cards and List Groups

Implement the examples along with the author.

Go through web pages for learning below specific topics

[Overriding Bootstrap Styles](#)

Continuous Learning: Technical Hands-on

Mandatory Hands-On:

- Bootstrap's Navigation Bar
- Page Layout

Additional Hands-on

- Bootstrap Responsive Grids
- Scrum Cards - Responsive Grid
- Bootstrap Badges and GMLs
- Bootstrap Cards

Day 25

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of Bootstrap



[The Bootstrap 4 Bootcamp](#)

Learn the sections listed below in this Udemy course and complete the corresponding hands-on coding given below.

- Navbars and Flexbox!
- The Magical Grid System
- Cards and List Groups

Implement the examples along with the author.

Go through web pages for learning below specific topics

[Overriding Bootstrap Styles](#)

Continuous Learning: Technical Hands-on

Mandatory Hands-On:

- Responsive Web Page

Additional Hands-on

- BS Loan Request Form
- Overriding Bootstrap Styles

Schedule – Stage 1: Week 6

Day 26

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of SQL



[70-461, 761: Querying Microsoft SQL Server with Transact-SQL](#)

Refer sections 1 to 11 in this Udemy course and complete the corresponding learnings.

Section 1: Session 1 - Let's begin, and let's download SQL Server

Section 2: Session 1 - Starting SQL Server

Section 3: Session 1 - Creating tables - First pass

Section 4: Session 1 - Number types and functions

Section 5: Session 1 - String data types and functions

Section 6: Session 1 - Date data types and functions

Section 7: Session 1 - Conclusion

Section 8: Welcome to Session 2

Section 9: Session 2 - Creating and querying part of a table

Section 10: Session 2 - Summarising and ordering data

Section 11: Session 2 - Adding a second table

Go through web pages for learning below specific topics

[SQL data types](#)

Day 27

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of SQL



[70-461, 761: Querying Microsoft SQL Server with Transact-SQL](#)

Refer below mentioned sections of the Udemy course

Section 12: Session 2 - Find missing data, and delete and update data

Section 14: Session 3 - Introduction

Section 15: Session 3 - Objective 4 - Create and modify constraints (simple statements)

Section 16: Session 3 - Objectives 2 and 3: Views

Section 17: Session 3 - Objective 5: Create and alter DML triggers

Section 18: Session 3 - Conclusion

Section 19: Session 4 - Introduction

Section 20: Session 4 - Objective 13: Combine datasets

Section 21: Session 4 - Objective 11 - Create and alter stored procedures



[Relational Database Design](#)

Refer all the sections of the Udemy course

Continuous Learning: Technical Hands-on

Introduction to Select Statement:

Mandatory Hands-on

- Display the Entire Contents of Claim Details
- Display the Firstname, Email and Phone Number of all Customers
- Display the Distinct agent Names

Modifying Data - create / update / Select / Constraints:

Mandatory Hands-on

- Create a table named address
- Alter table named customer policy with the Check constraint
- Alter a table named customer with the Email check constraint

Additional Hands-on

- Alter a table named insurance company

QUALIFIER MOCK

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of SQL



[70-461, 761: Querying Microsoft SQL Server with Transact-SQL](#)

Refer below given sections of the Udemy course

Section 22: Session 4 - Objective 18a - Implement try/catch/throw

Section 24: Session 5 - Introduction

Section 25: Session 5 - Objective 9: Implement aggregate queries

Section 26: Session 5 - Objective 9d: Ranking functions

Section 27: Session 5 - Objective 9a: New analytic functions

Section 28: Session 5 - Objective 9b: Grouping sets

Section 29: Session 5 - Objective 9c: Spatial aggregates

Section 31: Session 6 - Introduction

Section 32: Session 6 - Objective 7: Sub-queries

Section 33: Session 6 - Objective 7e: WITH statement



[Relational Database Design](#)

Refer all the sections of the Udemy course

Continuous Learning: Technical Hands-on

Mandatory Hands-on

Filtering Results with WHERE Statements / Using Group By and Having:

- Display specific Customer details
- Display Customer Policy for a specific period
- Extract Claim details for a specific period

Utilizing Joins:

- Display Claim details
- Display Customer with Policy details
- Extract the Customer with specific Policy details
- Display Customer and Policy details based on Name

Additional Hands-on

- Display Customer and Policy details based on Customer and Agent

Additional Learning:

Technical Quizzes:

Quiz 2 - Database concepts

Day 29

Web UI, DataSource (Day 16 - Day 30)

Continuous Learning: Technical Enablement

Learn the basics of SQL



[70-461, 761: Querying Microsoft SQL Server with Transact-SQL](#)

Refer given sections of the Udemy course

Section 34: Session 6 - Objective 7b: PIVOTing and UNPIVOTing

Section 35: Session 6 - Objective 7d: CTE statement

Section 36: Session 6 - Objective 14: Functions

Section 37: Session 6 - Objectives 6b and 6c: Synonyms and Dynamics

Section 38: Session 6 - Objectives 8c: GUIDs; and Sequences

Section 39: Session 6 - Objective 10: Query and manage XML data - converting tables to XML

Section 40: Session 6 - Objective 10: Shredding XML data

Section 41: Session 6 - Objective 10: Other XML considerations

Section 42: Session 6 - Manipulating JSON data (SQL Server 2016 onwards)

Section 43: Session 6 - Temporal Tables

Section 46: Session 7 - Manage transactions

Section 47: Session 7 - Indexes

Section 48: Session 7 - Optimise queries

Section 49: Session 7 - Dynamic Management Views and Functions

Section 50: Session 7 - Evaluate the use of row-based operations vs. set-based operations

Section 52: Bonus - Installing SQL Server 2016 Developer Edition



[Relational Database Design](#)

Refer all the sections of the Udemy course

Continuous Learning: Technical Hands-on

Subqueries:

Mandatory Hands-on

- Customers who have claimed minimum amount
- Insurance company from Thane
- Customers with Max and No policies using Union
- Claims which have Status Completed and Pending

Additional Hands-on

- Policies of specific Companies

Aggregating Data / Advanced Data Aggregations / Built-In Functions:

Mandatory Hands-on

- Display the number of customers belonging to Bangalore
- Display Customer info who have made maximum claims

Aggregating Data / Advanced Data Aggregations / Built-In Functions:

Additional Hands-on

- Display the number of policies by a specific Company
- Display the Names of customers

- Display the insurance company name which has Insurance in it

Common Table Expressions & Ranking:

Mandatory Hands-on

- CTE to Rank the Customer
- CTE for Policies offered by a Company

Additional Hands-on

- CTE to Rank agent based on policy count

Code Challenge

- Code Challenge 2 - DDL, DML & Select Statement
- Code Challenge 3 - Aggregate, Joins and Subqueries;
- Code Challenge 4 - CTE, Pivoting, PL/SQL

Day 30

Web UI, DataSource (Day 16 -Day 30)

Continuous Learning: Technical Enablement

Learn the basics of SQL



[70-461, 761: Querying Microsoft SQL Server with Transact-SQL](#)

Refer all the sections of the Udemy course



[Relational Database Design](#)

Refer all the sections of the Udemy course

Continuous Learning: Technical Hands-on

Recursion Pivoting and Sampling:

Mandatory Hands-on

- Pivot Customer Policies data
- Display policy details of customers across years using Pivot
- Create a Pivot to display the Year and Number of claims
- MERGE on Policy and Updated Policy tables

Additional Hands-on

- Display the top 5 claims using TABLESAMPLE
- Pivot Customer with specific policies

Implementing Error Handling - Exceptions / try-catch:

Mandatory Hands-on

- Create a function called 'find_customer_detail'
- Create a Procedure NoOfYears

Creating and Modifying Triggers / View / Stored Proc / User Defined Functions:

Mandatory Hands-on

- Create a View Customer Policies
- Create a function Duration of Claim
- Create a function Customer Details

Additional Hands-on

- Create a procedure Find_Customer

Additional Learning:

Technical Quizzes:

Quiz 3 - ANSI SQL

ICT :

- GenC - QAQE-TECHNICAL-.NET TRACK - SQL SERVER SKILL BASED ASSESSMENT [101-BASICS] - LAB_ATKNT059

Day 31 & 32

Qualifier of Stage 1

Day 33

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Learn and Practice

Go through the below mentioned sections and implement examples along with the author of this course.



[Spring Framework in Easy Steps](#)

- Introduction
- Software Setup
 - Troubleshooting Maven Projects
- Spring Core Concepts
- Setter Injection
 - Create a Maven Project
 - Create the Java Bean
 - Create the Spring Configuration
 - Create and run the test
 - Value as attribute
 - Using p:schema or p: namespace

Day 34

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Learn and Practice

Go through the below mentioned sections and implement examples along with the author of this course.



[Spring Framework in Easy Steps](#)

- Introduction
- Software Setup
 - Troubleshooting Maven Projects
- Spring Core Concepts
- Setter Injection
 - Create a Maven Project
 - Create the Java Bean
 - Create the Spring Configuration
 - Create and run the test
 - Value as attribute
 - Using p:schema or p: namespace

Day 35

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Injecting collections, dependency check, Inner Beans and Scope.

Learn and Practice



Go through the below mentioned sections and implement examples along with the author of this course.

[Spring Framework in Easy Steps](#)

- Setter Injection
 - Injecting Collections
 - List - Create the Spring Bean
 - List - Create the Configuration file
 - List - Create the Test
 - Running the test and flow
 - Two More Things About List
- Dependency Check , Inner beans and Scopes

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- EZEE Transport
- CurrencyConverter-Collections (Refer section 4.34 and 4.35 of Udemy course to implement this hands on)

Day 36

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Injecting collections, dependency check, Inner Beans and Scope. Constructor based Injection, Spring Core Concepts, Autowiring, and Usage of Properties.

Learn and Practice



Go through the below mentioned sections and implement examples along with the author of this course.

[Spring Framework in Easy Steps](#)

- Setter Injection
 - Injecting Collections

- List - Create the Spring Bean
- List - Create the Configuration file
- List - Create the Test
- Running the test and flow
- Two More Things About List
- Dependency Check , Inner beans and Scopes
- Constructor Injection
- Spring Core Concepts
- Using Properties
- Auto-Wiring

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Constructor Injection
- Autowiring

Day 37

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Constructor based Injection, Spring Core Concepts, Autowiring, and Usage of Properties. Stereotype Annotations, Injecting Interfaces

Learn and Practice



[Spring Framework in Easy Steps](#)

- Constructor Injection
- Spring Core Concepts
- Using Properties
- Stereotype Annotations
- Injecting Interfaces



[Spring Framework in Easy Steps](#)

- Auto-Wiring

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- EBanking
- Customer-Address-Scope

- DBConfig-SetterBasedInjection
- Customer-Address Inner Bean
- SpringAopDemo
- EngineAnalysis

Code Challenge

Code Challenge - Spring Framework

Day 38

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Stereotype Annotations, Injecting Interfaces

Learn and Practice



[Spring Framework in Easy Steps](#)

- Stereotype Annotations
- Injecting Interfaces

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Passport Service

Day 39

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Stereotype Annotations, Injecting Interfaces

Learn and Practice



[Spring Framework in Easy Steps](#)

- Stereotype Annotations
- Injecting Interfaces

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Billing Software Application

Day 40

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

Spring initializer, <https://start.spring.io>, pom.xml, @SpringBootApplication, SpringApplication.run (), Controller, @RequestMapping, @ResponseBody

Learn and Practice

Learn the fundamentals of Spring Boot, Spring MVC

[Learn Spring Boot 3 in 100 Steps - No 1 Java Framework.](#)



- Web Application with Spring Boot
 - Introduction
 - Skip Installation steps.
 - Step 01: Web Application with Spring Boot - Section Introduction
 - Step 01: Part 1 Basic Spring Boot Web Application Setup
 - Step 01: Part 2 Pom.xml, Spring Boot Application and application properties
 - Step 02: Part 1 First Spring MVC Controller, @ResponseBody, @Controller
 - Fastest Approach to Solve All Your Exceptions
 - Step 02: Part 2 Understanding HTTP Request Flow
 - Step 03: Demystifying some of the Spring Boot magic

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Age Calculator
- Zee Zee Login

Servlets and JSP

Continuous Learning: Technical Enablement

Overview, Understanding Servlets, Web Application Request Flow.

Learn and Practice



[Spring MVC For Beginners - Build Java Web App in 25 Steps](#)

- Part 1: Basic Java Web Application with JSP and Servlets..

Additional Learning:

Quiz 1 - Spring MVC and Spring Boot

Day 41

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

View Resolver, @RequestParam, ModelAndView, Dispatcher Servlet, Spring MVC Web request flow, Web Application Architecture, Session scope, Request scope, @SessionAttributes.

Learn and Practice

Learn the fundamentals of Spring Boot with Web Application



[Learn Spring Boot 3 in 100 Steps - No 1 Java Framework.](#)

- Web Application with Spring Boot
 - Step 04: Redirect to Login JSP -
 - @ResponseBody and View Resolver
 - Step 05: Show userid and password on welcome page - ModelAndView and @R...
 - Step 06: DispatcherServlet and Spring MVC Flow
 - Step 07: Your First HTML form
 - Step 08: Add hard-coded validation of userid and password
 - Step 09: Magic of Spring
 - Step 10: Create TodoController and list-todos view. Make TodoService a @S...
 - Step 11: Architecture of Web Applications
 - Step 12: Session vs Model vs Request- @SessionAttributes
 - Step 13: Add new todo

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Bakingo Cake Service

Spring Core, Spring Boot and MVC (Day 33 -Day 42)

Continuous Learning: Technical Enablement

JSTL tags, Spring MVC form tag library, Validations, initBinder

Learn and Practice

Learn the fundamentals of Spring MVC using Spring Boot



[Learn Spring Boot 3 in 100 Steps - No 1 Java Framework.](#)

- Web Application with Spring Boot
 - Step 14: Display Todos in a table
 - using JSTL Tags
 - Step 15: Bootstrap for Page Formatting using webjars
 - Step 16: Let's delete a Todo
 - Step 17: Format Add Todo Page and Adding Basic HTML5 form validation
 - Use modelAttribute instead of commandName
 - Step 18: Part 1 Validations with
 - Hibernate Validator - Using Command ...
 - Step 18: Part 2 Using JSR 349 Validations
 - Step 19: Updating a todo
 - Step 20: Let's add a Target Date for Todo - Use initBinder to Handle Date Fields

Step 25: Exception Handling

Spring MVC Internationalization (i18n) - implement internationalization using the Spring MVC framework.

Learn and Practice

Refer this [document](#) and implement the example.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- HolidayParty-Validations
- Front End-Internationalization
- Body Mass Index

Additional Learning:

Spring - MessageResource

Spring Resource bundle with ResourceBundleMessageSource example

Code Challenge

Code Challenge - Spring MVC with Spring Boot

Schedule – Stage 2: Day 43 to 52

Day 43 to 45

Microservices

Continuous Learning: Technical Enablement

The following Spring Restful Services topics will be handled by the trainer through Instructor led training

- RESTful Web Services, GET method, RESTful Web Service using MockMVC
- RESTful Web Service of type GET with Angular front end
- POST/PUT/DELETE method with input validation
- Type POST and PUT with Angular front end
- Performance testing of a restful web service using JMeter

Spring RESTful Web Services

Note: Excel is attached under this topic where we have given details about fundamentals of Spring RESTful till integration of Spring RESTful Web Services. To download this you might want to click **“Click here to download the learning objectives”**

Continuous Learning: Hands-On

Mandatory Hands-on

- 01-spring-rest-handson
- 02-spring-rest-handson
- 03-spring-rest-handson
- 04-spring-rest-handson
- 05-spring-rest-handson
- 06-spring-rest-handson
- 07-spring-rest-handson
- 08-spring-rest-handson

The handson will be evaluated by BU SME's and scores will be updated in the system

Day 46

Microservices

Continuous Learning: Technical Enablement

The following Spring Restful Services topics will be handled by the trainer through Instructor led training

- RESTful Web Services, GET method, RESTful Web Service using MockMVC
- RESTful Web Service of type GET with Angular front end
- POST/PUT/DELETE method with input validation
- Type POST and PUT with Angular front end
- Performance testing of a restful web service using JMeter

Continuous Learning: Hands-On

Mandatory Hands-on

- 09-spring-rest-handson
- 10-spring-rest-handson

The handson will be evaluated by BU SME's and scores will be updated in the system

Day 47 to 50

Microservices

The following Microservices topics will be handled by the trainer through Instructor led training

Continuous Learning: Technical Enablement

- [Microservices architecture, implementation and monitoring](#)
- [Service Registration and Discovery](#)
- [Routing and Filtering](#)
- [What is Docker?](#)
- [Nginx](#)
- [Docker command line](#)
- [MySQL](#)
- [OpenJDK](#)
- [Compose file](#)

Learn the fundamentals of **Service Verification** through below Udemy course

Learn and Practice



[Learn Java Unit Testing with JUnit & Mockito in 30 Steps](#)

- Introduction
- Unit Testing with JUnit
 - JUnit Step 1 : Why is Unit Testing Important?
 - JUnit Step 2 : Setting up your first JUnit
 - Step 03 : First Successful JUnit. Green Bar and assertEquals
 - Step 04 : Refactoring Your First JUnit Test
 - Step 05 : Second JUnit Example assertTrue and assertFalse
 - Step 06 : @Before @After
- Step 07 : @BeforeClass @AfterClass
- Unit Testing with JUnit
 - Step 08 : Comparing Arrays in JUnit Tests
 - Step 09 : Testing Exceptions in JUnit Tests
 - Step 10 : Testing Performance in JUnit Tests
 - Step 11 : Parameterized Tests
 - Step 12 : Organize JUnits into Suites
- Getting Ready for Mockito
- Need For Mockito
- Mockito Basics

Microservices

Note: Excel is attached under this topic where we have given details about fundamentals of Microservices till hosting a REST API Microservice using docker, linking angular, zuul gateway, microservices and database using docker compose. To download this you might want to click “**Click here to download the learning objectives**”

Continuous Learning: Hands-on

You will be working with BU SME's to do the below hands-on. Necessary guidance will be given by BU and evaluated by them. Scores will be updated in the system.

- 01-microservices-handson
- 02-docker-handson

Day 51 to 52

Microservices (Day 43 - Day 52)

The following Microservices topics will be handled by the trainer through Instructor led training

Continuous Learning: Technical Enablement

- [Microservices architecture, implementation and monitoring](#)
- [Service Registration and Discovery](#)
- [Routing and Filtering](#)

- [What is Docker?](#)
- [Nginx](#)
- [Docker command line](#)
- [MySQL](#)
- [OpenJDK](#)
- [Compose file](#)

Learn the fundamentals of **Service Verification** through below Udemey course

Learn and Practice

[Learn Java Unit Testing with Junit & Mockito in 30 Steps](#)



- Introduction
- Unit Testing with Junit
 - JUnit Step 1 : Why is Unit Testing Important?
 - JUnit Step 2 : Setting up your first JUnit
 - Step 03 : First Successful JUnit. Green Bar and assertEquals
 - Step 04 : Refactoring Your First Junit Test
 - Step 05 : Second JUnit Example assertTrue and assertFalse
 - Step 06 : @Before @After
- Step 07 : @BeforeClass @AfterClass
- Unit Testing with Junit
 - Step 08 : Comparing Arrays in Junit Tests
 - Step 09 : Testing Exceptions in Junit Tests
 - Step 10 : Testing Performance in Junit Tests
 - Step 11 : Parameterized Tests
 - Step 12 : Organize JUnits into Suites
- Getting Ready for Mockito
- Need For Mockito
- Mockito Basics

Continuous Learning: Hands-on

You will be working with BU SME's to do the below hands-on. Necessary guidance will be given by BU and evaluated by them. Scores will be updated in the system.

- 03-docker-handson

Additional Learning:

Technical Quizzes:

GenC - Microservices - Knowledge Based Assessment - ATH135738

Day 53

Automation Concepts, configuration, WebDriver Basics (Day 53 -Day 57)

Day 53 to 57 will be focusing on Selenium configuration and WebDriver Basics

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.

Business Aligned Project (Mini Project/ CAS Project/ Hackathon)

As the selenium learning starts, the project details (Mini project, CAS project and the Hackathon) will be given for the learners so that they can parallel keep doing the project activities along with the rest of the learnings.

The given Mini, CAS Project and the Hackathon are expected to be completed on or before the end week of the program.

Project Evaluation will be based on:

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

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 1 in this Udemy course and complete the corresponding learnings.

Section 1: Overview on Software Testing & Automation

Day 54

Automation Concepts, configuration, WebDriver Basics (Day 53 -Day 57)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this UdeMy course and complete the corresponding Subtopics from 17 to 25.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Object Identification By name

Project Deliverables

- CAS Project- CAS Team Connect

Day 55

Automation Concepts, configuration, WebDriver Basics (Day 53 -Day 57)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this UdeMy course and complete the corresponding Subtopics from 17 to 25.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- IdLocator
- All Web elements
- PageNavigation

Project Deliverable(Mini Project):

Overall Duration: Should start in parallel(on **Day 55**) with the Stage 2 Selenium Automation learnings and delivery on **Day 64**

The outcomes of doing **Mini Project** are:

- Enables learners to know on the environment setup

- Any web application is taken and learner try to automate given scenario using Selenium APIs
- Exhibits learner skills on automation of real time applications for smaller requirement.

Day 56

Automation Concepts, configuration, WebDriver Basics (Day 53 -Day 57)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this Udemy course and complete the corresponding Subtopics from 17 to 25.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Form Registration Basic
- Form Registration Advanced

Additional Hands-on

- User Registration PrintOptions - Basic Web Elements
- AgentRegistration Error Message - Basic Web Elements
- Login Servlet - Basic Web Elements

Additional Learning:

Technical Quizzes:

Quiz 1 - Automation Concepts, Selenium configuration, WebDriver Basics

Project Deliverables

- Integrate your mini project

Day 57

Automation Concepts, configuration, WebDriver Basics (Day 53 -Day 57)

Code Challenge

Code Challenge - Automation Concepts, Selenium configuration, WebDriver Basics

Schedule – Stage 2: Day 58 to 62

Day 58

Days 58 to 62 will be focusing on Automation Techniques and Dynamic XPath

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 Automation Techniques, Dynamic XPath (Day 58 - Day 62)

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic Xpath



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this Udemy course and complete the corresponding Subtopics from 26 to 32.

Section 3: Selenium WebDriver

Project Deliverable (CAS Project)

Overall Duration: Should start in parallel(on **Day 58**) with the Stage 2 Selenium Automation learnings and delivery on **Day 70**

The outcomes of doing **CAS Project** are:

- It is an individual team member activity
- Align to the BU real business problem
- Build automation test suite.
- Implement the Hybrid automation frameworks (Prototype) with all mandatory features.

- Automating good coverage of Regression Test Cases.

Day 59

Selenium Automation Techniques, Dynamic XPath (Day 58 - Day 62)

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic Xpath



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this Udemy course and complete the corresponding Subtopics from 26 to 32.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- CSSLocator
- AbsoluteXPathLocator

Day 60

Selenium Automation Techniques, Dynamic XPath (Day 58 - Day 62)

Continuous Learning: Technical Enablement

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic Xpath



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this Udemy course and complete the corresponding Subtopics from 26 to 32.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Relative Xpath Locator
- Handling RegEx Selenium
- XPath Ancestor

Additional Hands-on

- StudentRegistration - Dynamic Xpath
- CommodityDetails - Dynamic Xpath
- CustomerRegistration - Dynamic Xpath
- Registration, Invalid - Dynamic Xpath

Project Deliverables

- Integrate your mini project

Day 61

Selenium Automation Techniques, Dynamic XPath (Day 58 - Day 62)

Continuous Learning: Technical Enablement

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic Xpath



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer section 3 in this Udemy course and complete the corresponding Subtopics from 26 to 32.

Section 3: Selenium WebDriver

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Work with Alerts
- Work with Javascript Executor
- Multiple Window
- Drag and Drop with Slider

Additional Learning:

Technical Quizzes:

Quiz 1 - Selenium Automation Techniques, Dynamic XPath

Project Deliverables

- Integrate your mini project

Day 62

Selenium Automation Techniques, Dynamic XPath (Day 58 - Day 62)

Code Challenge

Code Challenge - Selenium Automation Techniques, Dynamic Xpath

Project Deliverables

- Project Mentor Connect
- Integrate your CAS project

Schedule – Stage 2: Day 63 to 67

Day 63

Days 63 to 68 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 ApachePOI (Day 63 - Day 67)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI



[Learn Selenium with Java, Cucumber + Live Project](#)

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

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

Project Deliverables

- Integrate your CAS project

Day 64

Selenium Webdriver With POM and ApachePOI (Day 63 - Day 67)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI



[Learn Selenium with Java, Cucumber + Live Project](#)

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

Mandatory Hands-on

- Applying POI - 1
- Applying POI – 2

Additional Hands-on

- AgentRegistration – ApachePOI

Project Deliverables

- Integrate your mini project

Day 65

Selenium Webdriver With POM and ApachePOI (Day 63 - Day 67)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI



[Learn Selenium with Java, Cucumber + Live Project](#)

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

Section 5: TestNG Framework for Selenium

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Applying POI With POM – 1

Additional Hands-on

- FormRegistration, ReadExcelBySheetName - ApachePOI

Project Deliverables

- Integrate your CAS project

Day 66

Selenium Webdriver With POM and ApachePOI (Day 63 - Day 67)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI



[Learn Selenium with Java, Cucumber + Live Project](#)

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

Section 5: TestNG Framework for Selenium

Evaluation: Interim Project Evaluation + Technical Evaluation

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Applying POI with POM – 2

Additional Hands-on

- InvoiceUpdates - ApachePOI
- ShippingDetails – ApachePOI

Additional Learning:

Technical Quizzes:

Quiz 1 - Selenium Webdriver With POM and ApachePOI

Project Deliverables

- Integrate your CAS project

Day 67

Selenium Webdriver With POM and ApachePOI (Day 63 - Day 67)

Code Challenge

Code Challenge - Selenium Webdriver With POM and ApachePOI

Project Deliverables

- Project Mentor Connect
- Integrate your CAS project

Schedule – Stage 2: Day 68 to 72

Days 68

Automation Testing - Selenium with TestNG (Day 68 - Day 72)

Days 68 to 72 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.

Learn the basics of Selenium with TestNG



[Learn Selenium with Java, Cucumber + Live Project](#)

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

Section 6: Page Object Model

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- TestNG Annotations – 1
- TestNG Annotations – 2

Project Deliverables

- Integrate your CAS project

Day 69

Automation Testing - Selenium with TestNG (Day 68 - Day 72)

Continuous Learning: Technical Enablement

Continuous Learning: Technical Enablement

Learn the basics of Selenium with DataSource XML Parsing



[Learn Selenium with Java, Cucumber + Live Project](#)

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

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

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Shipment Cost - TestNG with DataProvider

Additional Hands-on

- AddressBook – TestNG
- ShipmentCharge - TestNG
- Shopify With Dataprovider - TestNG
- UserDetails - TestNG

Additional Learning:

Technical Quizzes:

Quiz 1 - Selenium with TestNG

Day 70

Automation Testing - Selenium with TestNG (Day 68 - Day 72)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with DataSource XML Parsing



[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
- XMLParser_Solution Explanation

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- XMLParsing -1
- Work With XML and POM - 1
- Work With XML and POM - 2 (Commodity)
- Work With XML and POM - 3(Discount Calculator)

Project Deliverables

- Deliver your CAS project

Day 71

Automation Testing - Selenium with TestNG (Day 68 - Day 72)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with Datasource XML Parsing



[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

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Work With XML and POM - 4(Shipment Detail)
- Work With XML and POM - 5(Customer Registration)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with Datasource JSON Parsing

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

Mandatory Hands-on

- JSONParsing - 1

Project Deliverable (Hackathon Project)

Overall Duration: Should start Hackathon project parallel with the Stage 2 Selenium Automation learnings

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.

Day 72

Automation Testing - Selenium with TestNG (Day 68 - Day 72)

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Work With JSON and POM - 1

Technical Quizzes:

Quiz 2 - Selenium with different DataSource

Code Challenge

Code Challenge - Selenium with TestNG

Project Deliverables

- Integrate your Hackathon project

Schedule – Stage 2: Day 73 to 77

Day 73

Digital Technologies (Day 73 - Day 77)

Days 73 to 77 will be focusing on Selenium with BDD, Cucumber and WebServices. 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

Learn webservises testing with SOAPUI.



[WebServices/Rest API Testing with SoapUI +Real time Projects](#)

Refer sections 1, 2, 3, 4,5, 6, 7 and 8 in this UdemY course and complete the corresponding learnings.

Section 1-8: SOAP UI tool basic features, REST API, JSON Assertions, End-to-End framework design

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Testing REST Hotel Service - SOAP UI
- Testing REST Train Service - SOAP UI

Continuous Learning: Technical Enablement

Learn webservices testing with SOAPUI.



[POSTMAN API Testing - Step by Step for Beginners](#)

Refer sections 1 to 13 in this UdemY course and complete the corresponding learnings.

Section 1-13: Collections, Variables, Environments, Test script creation, Data Driven testing, Authorization, Command line and JENKINS, Workspaced, monitors, Documentation, Remote Execution, SOAP UPI testing, API chaining and Mock API.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Simple SOAP UI web services project with WSDL
- Simple SOAP UI web services project with WADL

Project Deliverables

- Integrate your Hackathon project

Day 74

Digital Technologies (Day 73 - Day 77)

Continuous Learning: Technical Enablement

Learn SOAPUI Concepts.



[WebServices/Rest API Testing with SoapUI +Real time Projects](#)

Refer sections 1, 2, 3, 4,5, 6, 7 and 8 in this Udemy course and complete the corresponding learnings.

Section 1-8: SOAP UI tool basic features, REST API, JSON Assertions, End-to-End framework design

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- TeamPlayers
- Creation of new PostMan request with collection

Continuous Learning: Technical Enablement

Learn POSTMAN Concepts.



[POSTMAN API testing for beginners](#)

Refer sections 1 to 13 in this Udemy course and complete the corresponding learnings.

Section 1-13: Collections, Variables, Environments, Test script creation, Data Driven testing, Authorization, Command line and JENKINS, Workspaced, monitors, Documentation, Remote Execution, SOAP UPI testing, API chaining and Mock API.

Code Challenge

Code Challenge - WebServices

Integrated Capability Test (ICT) - SELENIUM MOCK

Additional Learning:

Technical Quizzes:

WebServices

Project Deliverables

- Integrate your Hackathon project

Day 75

Digital Technologies (Day 73 - Day 77)

Continuous Learning: Technical Enablement

Learn Devops and Grid



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer sections 8 and 10 in this Udemy course and complete the corresponding learnings.

Section 8: CI - Maven, Git, Github & Jenkins
Section 10: Selenium Grid

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- MavenTestApp
- MavenJavaApp
- Build Periodically
- Build Maven Project
- Clone Repo
- Setup Grid and parallel execution
- Git Branch

Additional Hands-on

- GIT installation & commands implementation
- Install Jenkins and Creation of new job
- Mavenization using Eclipse M2E plugin Options and CLI commands

Day 76

Digital Technologies (Day 73 - Day 77)

Continuous Learning: Technical Enablement

Learn Cucumber BDD Framework.



[Learn Selenium with Java, Cucumber + Live Project](#)

Refer sections 9 in this Udemy course and complete the corresponding learnings.

Section 9: Cucumber BDD Framework

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Cucumber – UserPage
- Cucumber - Shopify

Additional Hands-on

- Simple cucumber project with phptravels
- Simple cucumber project using datatable
- Simple cucumber project using scenario outline

Additional Learning:

Technical Quizzes:

Cucumber and DevOps

Project Deliverables

- Integrate your Hackathon project

Day 77

Digital technologies

Rehearse the topics based on need

Integrated Capability Test:

Integrated Capability Test (ICT) - SELENIUM

Day 78 to 80

Evaluation:

Final Project Evaluation + 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 criteria.

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

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.