Cognizant Academy

Generation Cognizant (GenC) Learner Handbook

(IPM Product Testing with Selenium Automation – 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 (4 weeks)
- Stage 2 – Pega Basics with Selenium Automation(8 weeks – Inclusive of the Project)
  - Business Aligned Project
  - Interim Evaluation
  - Final Evaluation

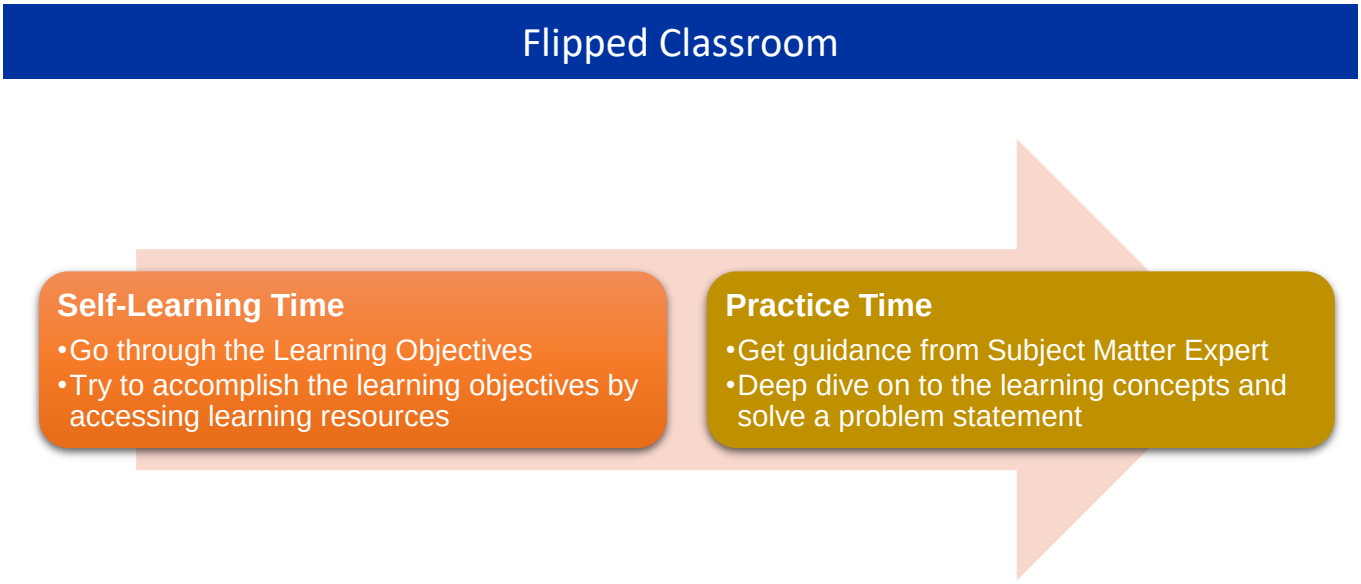
Program Highlights

- 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.

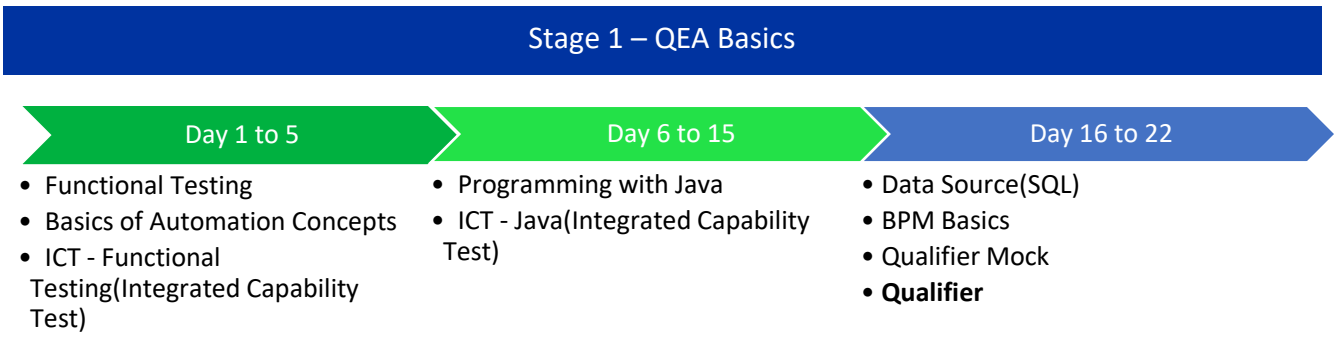
The complete learning path is set in the GEN C Learn Platform, which you can login with SSO



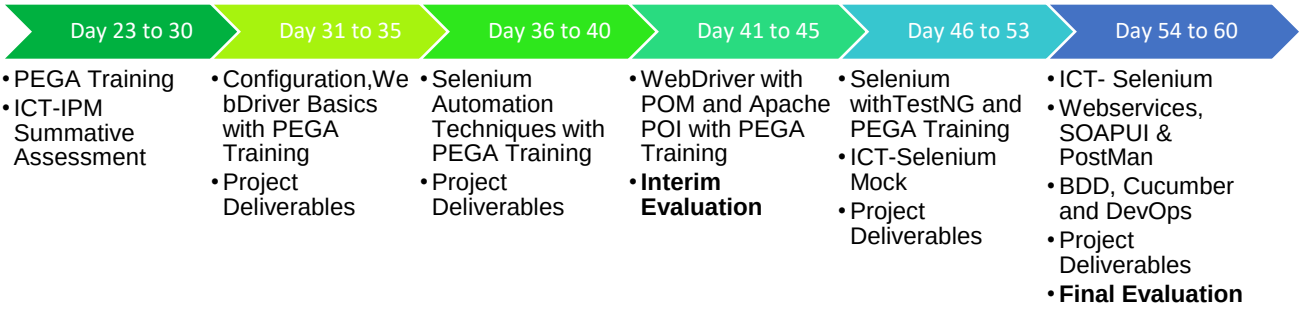
Recommended Program Sequence

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

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



Stage 2 – Pega Basics with Selenium Automation



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 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.

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 3 – Check Point Intervals

Check points	Interpreting Status
Interim Evaluations (Technical and Project)	- Green - On Track for Graduation - Red /Amber - There will not be any re-attempts given
Final Evaluations (Technical and Project)	- Green - On Track for Graduation - Red /Amber – Only 2 attempts are given. **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.

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,Spiral Model & V-Model

Static Testing & Dynamic Testing

Verification & Validation

White Box & Black Box Testing Method

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

Day 3

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

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

Rehearse the sections based on need and complete the corresponding learnings.

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:

Quiz 1 - Functional Testing

Day 5

Functional Testing (Day1 - Day5)

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 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 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

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 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

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

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 Udemy 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:
Technical Quizzes:

- Quiz 2 - Applying Object Oriented Concepts in java

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/

Day 13

Java Programming Fundamentals (Day 6 - Day15)

Continuous Learning: Technical Enablement

Java 8 Features - Lambda Expressions, Streams, Filters, java.time.

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,

Java User Input (Scanner)

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 within the range_JDBC

Code Challenge: Code Challenge - Group 2

Day 15

Java Programming Fundamentals (Day 6 - Day15)

- Rehearse the sections based on need

Integrated Capability Test

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

Schedule – Day 16 to 20

Day 16 to 20 will be focusing on SQL and BPM 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.

Day 16

SQL and BPM Basics (Day 16 to Day 20)

Continuous Learning: Technical Enablement

Learn the basics of SQL

Relational Database Design

Refer all the sections of the Udemy course

Go through web pages for learning below specific topic- **No SQL overview**

Introduction to NoSQL

SQL for Beginners: Learn SQL using MySQL and Database Design

Refer sections 1 to 12, and 14 in this Udemy course and complete the corresponding learnings.

Section 1: Course Introduction

Section 2: Installation and Setup

Section 3: Data Definition Language

Section 4: More on Alter Table

Section 5: Data Manipulation

Section 6: Selecting from a Table

Section 7: Selecting from Multiple Tables

Go through web pages for learning below specific topics

RANK Function

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Insert Records - Department
- Department name based on block number
- Student and their Department Based on City

Day 17

SQL and BPM Basics (Day 16 to Day 20)

Continuous Learning: Technical Enablement

Learn the basics of SQL

Relational Database Design

Refer all the sections of the Udemy course

Go through web pages for learning below specific topic- **No SQL overview**

Introduction to NoSQL

SQL for Beginners: Learn SQL using MySQL and Database Design

Refer sections 8, 9, 10, 11 and 12 in this Udemy course and complete the corresponding learnings.

Section 8: Database Design

Section 9: Creating a Cinema Booking System Database

Section 10: Aggregate Functions

Section 11: Subqueries

Section 12: MySQL Functions - String Functions and Date Functions

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Hunger eats - update table
- Delivery Partner details based on rating
- Car rental system - Insert values
- Customers having gmail id
- Car details based on type and name
- Car & owner details based on car type

Additional Hands-on

- Car rental system - Create Table
- Car rental system - add new column
- Hunger eats - change datatype
- Hunger eats - Change the field name

Additional Learning:

Technical Quizzes:
Quiz 1 - Database concepts

Day 18

SQL and BPM Basics (Day 16 to Day 20)

Continuous Learning: Technical Enablement

Learn the basics of SQL

Relational Database Design

Refer all the sections of the Udemy course

Go through web pages for learning below specific topic- **No SQL overview**

Introduction to NoSQL

SQL for Beginners: Learn SQL using MySQL and Database Design

Refer sections 13 and 14 in this Udemy course and complete the corresponding learnings.

Section 13: Challenges

Section 14: Extra Information -Source code, and other stuff

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Concatenating Details
- Hotels that took order based on month
- Hotel_info
- Rental details based on date
- Password Generation
- Customer using HDFC bank

Additional Learning:

Technical Quizzes:
Quiz 2 - ANSI SQL

Mock Qualifier Assessment

Day 19

SQL and BPM Basics (Day 16 to Day 20)

Continuous Learning: Technical Enablement

Learn the basics of BPM

Refer below sections in the Tekstac platform and complete the corresponding learnings.

BPM Basics

Appian Overview

BPM Overview

IBM BPM Overview

Additional Hands-on

- Total sale daywise
- Hotels that took order more than five times
- Credential details
- Maruthi car owner details
- Cars not taken for rent
- No of time rented by each car
- Customer mail details
- Order details
- Hotels not taken orders in a specific month
- Number of Tickets Booked
- Buses based on Source and Destination

Day 20

SQL and BPM Basics (Day 16 to Day 20)

Code Challenge
Code Challenge 1 - DDL, DML & Select Statement

Code Challenge 2 - JOINS and SUBQUERIES

Day 21 & Day 22

Qualifier Assessment on Java, SQL and Web UI

Schedule – Stage 2: Day 23 to 30

Day 23 to 29 will be focusing on PEGA Trainings. All the Pega modules video are placed in the Platform to understand the fundamental concepts. BU SME will facilitate the learnings.

Apply the concepts learned and solve the BU Driven Hands-on as recommended.

Day 23

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings.

Introduction to BPM
Basics
Different Technology of BPM
Appian Overview
IBM BPM Overview
Pega Overview
Set-up PDN Account

Mandatory Courses

Introduction to Pega Platform (in PDN)

Refer all the sections in Pega sites

- Low-code defined
- Dev Studio overview
- Defining a Customer Microjourney
- Data Model
- Capturing and presenting data
- Designing an approval process

Additional Learnings

- Basic PRPC concept
- Commonly used PRPC rules activity
- Operators and Access Group
- Roles, Portals & Rules

Additional Video Recordings

- QEA_IPM_BPM and Pega Basics
- QEA_IPM_Basic PRPC concepts

Day 24

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings.

Basic PRPC concept
Generic Pega 5 to 8 evolution journey
PRPC rules activity
Operators and Access Group
Roles, Portals and Studios
PRPC Rules & RuleTypes

Mandatory Courses

Pega Test Automation (in PDN)

Refer all the sections in Pega sites

- Application quality practices
- Testing practices for Pega applications
- Performing Pega unit testing
- Performing Pega scenario testing
- Applying the advanced features of test automation

Additional Learning:

- Work object, Work Basket & Work list
- Clipboard & Tracer

Additional Video Recordings

- QEA_IPM_SMA_PDN
- QEA_IPM_Work Object_PAL_SLA Testing

Day 25

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings.

Work object, Work Basket & Work list
Pega Debugging Tools (Clipboard, Tracer, LiveUI,etc)
PAL & PLA
SLA Testing/Routing Logic

Additional Learnings:

- PAL
- SLA Testing

Additional Video Recordings

- QEA_IPM_Alerts and Logs

Day 26

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings.

Pega scenario Testing, AUT/Pega Unit Testing
Alerts and Logs Overview
Agents and Listeners (Email and File)

Additional Learnings:

- Verifying Alerts and Logs
- Pega Selenium Starter Kit Configuration

Day 27

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings

Comparison of different Pega Versions
PEGA 8.X Concepts
Pega Selenium Starter Kit Configuration
PEGA Frameworks (CDH, DSM, CRM, CSF)

Additional Learnings:

- SMA and Integration
- PDN & Online Access

Day 28

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

To learn the basics of Pega. Refer below section and complete the corresponding learnings

PEGA Testing Approach
PEGA Upgrade essentials

Additional Learnings:

- Introduction to BPM
- Operators & Access Group

Day 29

Pega Training (Day 23 - Day 30)

Continuous Learning: Technical Enablement

PEGA Hands On and Q&A Session

Hands On:

- SME Driven

Day 30

Pega Training (Day 23 - Day 30)

Pega ICT
Integrated Capability Test (ICT) - IPM Summative Assessment -ATHPG135593

Schedule – Stage 2: Day 31 to 35

Day 31

Configuration, WebDriver Basics with Pega (Day 31 - Day 35)

From now on, you 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/ Pega Project Case Study / Hackathon)

As the selenium learning starts, the project details (Mini project, Pega Project Case Study, 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, Pega Project Case Study 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

Note:

Mini Project is an individual team member activity. Project Requirement is available in the platform

Pega Project Case Study is an individual activity – Individual requirements will be given by the BU team and candidates must complete the requirement and submit the solution for evaluations by BU SME.

Hackathon is an individual activity. Project requirement is available in the platform.

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics

Learn Selenium with Java, Cucumber + Live Project

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

Section 1: Overview on Automation & Selenium

Section 2: Java Essentials for Selenium

Section 3: Java OOPS Concepts

Day 32

Configuration, WebDriver Basics with Pega (Day 30 - Day 34)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics

Learn Selenium with Java, Cucumber + Live Project

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

Section 4: Selenium WebDriver Basics

Section 5: Data Driven Testing

Section 6: TestNG Framework

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Object Identification By name

Day 33

Configuration, WebDriver Basics with Pega (Day 30 - Day 34)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver Basics

Learn Selenium with Java, Cucumber + Live Project

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

Section 7: Advanced Concepts

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- IdLocator
- All Web elements
- Page Navigation

Project Deliverable (Mini Project):

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

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 34

Configuration, WebDriver Basics with Pega (Day 30 - Day 34)

Continuous Learning: Technical Enablement

Learn the basics of WebElement

Learn Selenium with Java, Cucumber + Live Project

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

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
- All Webelements - Pega
- PageNavigation - Pega
- IdLocator - Pega

Additional Learning:

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

Project Deliverable (Mini Project)

- Integrate the mini project

Day 35

Configuration, WebDriver Basics with Pega (Day 30 - Day 34)

Continuous Learning: Additional Recordings

QEA_IPM_SELENIUM_WEBDRIVER ARCHITECTURE, SETUP BASIC SCRIPTING [101-BASICS]

QEA_IPM_SELENIUM_ARCHITECTURE AND FUNDAMENTALS [101-BASICS]

QEA_IPM_SELENIUM_WEBDRIVER [101-BASICS]

Code Challenge
Code Challenge - Automation Concepts, Selenium configuration, WebDriver Basics

Schedule – Stage 2: Day 36 to 40

Day 36

Selenium Automation Techniques with Pega (Day 36 - Day 40)

Continuous Learning: Technical Enablement
Learn the basics of Automation Techniques and Dynamic XPath

Learn Selenium with Java, Cucumber + Live Project

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

Section 1: Overview on Automation & Selenium

Section 2: Java Essentials for Selenium

Section 3: Java OOPS Concepts

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- CSSLocator
- AbsoluteXpathLocator
- Relative Xpath Locator
- Handling RegEx Selenium

Project Deliverable (Mini Project)

- Integrate the mini project

Day 37

Selenium Automation Techniques with Pega (Day 36 - Day 40)

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic XPath

Learn Selenium with Java, Cucumber + Live Project

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

Section 4: Selenium WebDriver Basics

Section 5: Data Driven Testing

Section 6: TestNG Framework

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- 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 38

Selenium Automation Techniques with Pega (Day 36 - Day 40)

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques

Learn Selenium with Java, Cucumber + Live Project

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

Section 7: Advanced Concepts

Continuous Learning: Technical Hands-on

Mandatory Hands-on

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

Project Deliverables

- Integrate your mini project

Day 39

Selenium Automation Techniques with Pega (Day 36 - Day 40)

Continuous Learning: Technical Enablement

Learn the basics of Automation Techniques and Dynamic XPath

Learn Selenium with Java, Cucumber + Live Project

Refer section the Udemy course and complete the corresponding learnings.

Continuous Learning: Technical Hands-on

Additional Hands- on:

- CSS Locator - Pega
- Handling RegEx Selenium - Pega
- Absolute xpath locator- Pega
- Work with Javascript Executor - Pega
- XPath Ancestor - Pega
- RelativeXpathLocator - Pega

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

Project Deliverable (Pega Project Case Study)

Overall Duration: Should start Pega Project Case Study parallel with the Stage 2 Selenium Automation learnings

The outcomes of doing **Pega Project Case Study** are:

- Collaborate and deliver as a Team
- 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 40

Selenium Automation Techniques with Pega (Day 36 - Day 40)

Continuous Learning: Additional Recordings

Learn the basics of Automation Techniques and Dynamic XPath

QEA_IPM_SELENIUM_CUSTOMIZED XPATH AUTOMATION [101-BASICS]

QEA_IPM_ALERTS AND LOGS_PART 1 [101-BASICS]

QEA_IPM_ALERTS AND LOGS_PART 2 [101-BASICS]

Code Challenge
Code Challenge - Selenium Automation Techniques, Dynamic Xpath

Schedule – Stage 2: Day 41 to 45

Day 41

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.

Webdriver With POM, ApachePOI with Pega (Day 41 - Day 45)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI

Learn Selenium with Java, Cucumber + Live Project

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

Section 1: Overview on Automation & Selenium

Section 2: Java Essentials for Selenium

Section 3: Java OOPS Concepts

Project Deliverables

- Integrate your Pega Project Case Study

Day 42

Webdriver With POM, ApachePOI with Pega (Day 41 - Day 45)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI

Learn Selenium with Java, Cucumber + Live Project

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

Section 4: Selenium WebDriver

Section 5: Data Driven Testing

Section 6: TestNG Framework

Continuous Learning: Technical Hands-on

Additional Hands-on

- AgentRegistration – ApachePOI

Mandatory Hands-on

- Applying POI - 1
- Applying POI – 2

Project Deliverables

- Integrate your Pega Project Case Study

Day 43

Webdriver With POM, ApachePOI with Pega (Day 41 - Day 45)

Continuous Learning: Technical Enablement

Learn the basics of WebDriver with POM and ApachePOI

Learn Selenium with Java, Cucumber + Live Project

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

Section 7: Advanced Concepts

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Applying POI With POM – 1

Additional Hands-on

- FormRegistration, ReadExcelBySheetName – ApachePOI

Project Deliverables

- Integrate your Pega Project Case Study

Day 44

Webdriver With POM, ApachePOI with Pega (Day 41 - Day 45)

Continuous Learning: Additional Recordings

QEA_IPM_SELENIUM_APACHEPOI WITH DATAPROVIDER [101-BASICS]

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- Applying POI with POM – 2

Additional Hands-on

- InvoiceUpdates - ApachePOI
- ShippingDetails – ApachePOI
- Applying POI - Pega

Additional Learning:

Technical Quizzes:
Quiz 1 - Selenium Webdriver with POM and ApachePOI

Project Deliverables

- Integrate your Pega Project Case Study

Day 45

Webdriver With POM, ApachePOI with Pega (Day 41 - Day 45)

Continuous Learning: Additional Recordings

QEA_IPM_SELENIUM_WEBDRIVER AUTOMATION WITH WEBTABLE [101-BASICS]

Code Challenge

Code Challenge - Selenium Webdriver with POM and ApachePOI

Project Deliverables

- Integrate your Pega Project Case Study

Schedule – Stage 2: Day 46 to 53

Day 46

Selenium with TestNG (Day 46 - Day 53)

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.

Continuous Learning: Technical Enablement

Learn the basics of Selenium with TestNG

Learn Selenium with Java, Cucumber + Live Project

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

Section 1: Overview on Automation & Selenium

Section 2: Java Essentials for Selenium

Section 3: Java OOPS Concepts

Mandatory Hands-on

- TestNG Annotations – 1
- TestNG Annotations – 2

Evaluation:
Interim Evaluation

Day 47

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with TestNG

Learn Selenium with Java, Cucumber + Live Project

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

Section 5: Data Driven Testing

Section 6: TestNG Framework

Section 7: Advanced Concepts

Mandatory Hands-on

- Shipment Cost - TestNG with DataProvider

Additional Hands-on

- AddressBook – TestNG

Project Deliverables

- Integrate your Pega Project Case Study

Day 48

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with TestNG

Learn Selenium with Java, Cucumber + Live Project

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

Continuous Learning: Technical Hands-on

Additional Hands-on

- ShipmentCharge - TestNG
- Shopify With Dataprovider - TestNG
- UserDetails - TestNG

Project Deliverables

- Deliver your Pega Project Case Study

Day 49

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with TestNG

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

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

Additional Learning:

Technical Quizzes:
Quiz 1 - Selenium with TestNG

Project Deliverable (Hackathon Project)

Overall Duration: Should start your Hackathon parallel on this day

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 50

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with TestNG

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

Code Challenge
Code Challenge - Selenium with TestNG

Day 51

Selenium with TestNG (Day 46 - Day 53)

You will continue focusing 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.

Continuous Learning: Additional video Recordings

QEA_IPM_SELENIUM_XML AND JSON FUNDAMENTALS [101-BASICS]

QEA_IPM_SELENIUM_TESTNG [101-BASICS]

QEA_IPM_SELENIUM_TESTNG WITH PARALLEL EXECUTION [101-BASICS]

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

- Integrate your Hackathon project

Day 52

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with Datasource XML Parsing

QEA_IPM_SELENIUM_PEGA_WORKOBJECT_BASKET_LIST [101-BASICS]

QEA_IPM_SELENIUM_JSONPARSING AUTOMATION [101-BASICS]

Continuous Learning: Technical Hands-on

Mandatory Hands-on

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

Project Deliverables

- Integrate your Hackathon project

Mock ICT:
Integrated Capability Test (ICT) - SELENIUM MOCK

Day 53

Selenium with TestNG (Day 46 - Day 53)

Continuous Learning: Technical Enablement

Learn the basics of Selenium with Datasource JSON Parsing

QEA_IPM_SELENIUM_PAGE OBJECT MODEL [101-BASICS]

QEA_IPM_SELENIUM_WEBSERVICES AND TYPES OF SERVICES [101-BASICS]

QEA_IPM_SELENIUM WITH LIVE PROJECT AUTOMATION [101-BASICS]

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
- Work with JSON and POM - 1

Additional Learning:

Technical Quizzes:
Quiz 2 - Selenium with different DataSource

Schedule – Stage 2: Day 54 to 60

Day 54

Digital Technologies (Day 54 - Day 60)

Continuous Learning: Technical Enablement

Learn webservices 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

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

- TeamPlayers
- Creation of new PostMan request with collection
- Maven TestApp
- Maven JavaApp

Project Deliverables

- Integrate your Hackathon project

Day 55

Digital Technologies (Day 54 - Day 60)

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

- Build Periodically
- Build Maven Project
- Clone Repo
- Git Banch

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

Additional Learning:

Technical Quizzes:
Quiz 1 – WebServices

Project Deliverables

- Integrate your Hackathon project

Day 56

Digital Technologies (Day 54 - Day 60)

Continuous Learning: Technical Enablement

Learn BDD and Cucumber Concepts.

Learn Selenium with Java, Cucumber + Live Project

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

Section 8: Maven integration with Selenium

Continuous Learning: Technical Hands-on

Additional Hands-on

- Simple cucumber project with phptravels

- Simple cucumber project using datatable
- Simple cucumber project using scenario outline
- Mavenization using Eclipse M2E plugin Options and CLI commands

Integrated Capability Test:

Integrated Capability Test (ICT) – SELENIUM

Project Deliverables

- Integrate your Hackathon project

Day 57

Digital Technologies (Day 54 - Day 60)

Continuous Learning: Technical Enablement

Learn GRID

Learn Selenium with Java, Cucumber + Live Project

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

Section 9: Selenium Grid.

Continuous Learning: Technical Hands-on

Mandatory Hands-on

- GIT installation & commands implementation
- Install Jenkins and Creation of new job
- Setup Grid and parallel execution
- Cucumber – UserPage
- Cucumber - Shopify

Technical Quizzes:
Quiz 2 - Cucumber and DevOps

Project Deliverables

- Deliver the Hackathon project

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

Day 58 - 60

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 lowing:

- 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.