



Section 3.1 Java & OOPs

AN INITIATIVE BY

UNICAL ACADEMY

Introduction to Script based Testing

At the end of this session, participants will be able to get an idea on–

- Testing of a simple login screen (without captcha)
- Logic scripting by referring already written script
- Recap and Session specific Q&A

Overview of Java

At the end of this session, participants will be able to get an idea on—

- Historical perspective of Java Programming Language
- Advantages and Features of java
- How java works
- Basic syntax such as primitive types and variables, Initialization, Declarations, Arrays, Object and Class etc.
- Writing simple programs and execution process.
- Passing arguments from the command line.
- Recap and Session specific Q&A

Operators & Control Flow

At the end of this session, participants will be able to get an idea on—

- Operators of java such as Arithmetic Operators, Assignment Operators, Logical Operators, Ternary Operator, Relational Operator etc.
- Control flow statements supported by the Java programming language such as Decision Making statements, Loop statements and Jump statements.
- Recap and Session specific Q&A

Access Control

At the end of this session, participants will be able to get an idea on–

- Usage of Packages and Package declaration
- Accessibility of modifiers
- Importance of Imports & Static Import
- Programming structure – includes Identifiers, Java Methods, Variable Scope, Casting, Programming Style and Class Structure
- Recap and Session specific Q&A

OOPS - An Overview

At the end of this session, participants will be able to get an idea on–

- Object-Oriented Programming System (OOPs) programming concepts which works on the principles of abstraction, encapsulation, inheritance, and polymorphism.
- Method signature and defining methods.
- Providing Constructors for the Classes
- Usage of this/super, static & final keywords
- Recap and Session specific Q&A

Exceptions

At the end of this session, participants will be able to get an idea on–

- When an Exception occurs and how Exception is different from Error
- Exception Hierarchy
- Exception handling methods and Error display information methods
- Creating our own exception and throw that exception using Throw keyword.
- Recap and Session specific Q&A

IO Stream

At the end of this session, participants will be able to get an idea on–

- File handling methods such as creating, reading, updating and deleting files
- Performing Input / Output operations through Streams.
- Purpose of Reader and Writer classes
- Data reading from and writing into the excel file using Apache-POI
- Recap and Session specific Q&A

Collections

At the end of this session, participants will be able to get an idea on—

- Need for a Collection Interface Framework
- Hierarchy of the Collection Framework
- Collection implementation classes for the interfaces
- Methods for collection framework algorithms
- Recap and Session specific Q&A

Database Connection (JDBC)

At the end of this session, participants will be able to get an idea on—

- Installing and configuring MySQL database
- Connecting MySQL Database in Eclipse
- Connection Interface Commands and Statement Interface Commands
- How to execute query
- Recap and Session specific Q&A

Debug Java code Scripts in Eclipse or IntelliJ

At the end of this session, participants will be able to get an idea on—

- Code debugging using breakpoints
- Verify the values during debug
- Recap and Session specific Q&A