

# Syllabus

## Java on AWS

### Topics covered as follows

#### Introduction to java programming

- Overview of java programming language
- Setting up the development environment (IDE , JDK)
- Writing and running basic java programs and understanding java syntax and data types
- Object-oriented programming in java

#### Concepts of objects-oriented programming

- Classes and objects
- Inheritance, Polymorphism , Encapsulation and abstraction
- Exception Handling and file I/O

#### Handling exception in java

- File input/output operation in java
- Advanced java concepts
- Java collection framework

#### Overview of java collection

- Lists, sets, Maps and queues, Iteraters and Genrics.
- Multithreading in java

## **Introduction to Multithreading**

- Synchronization and thread safety
- Thread pools and concurrency utilities
- Java database connectivity

## **Connecting java applications to database executing SQL queries**

- Handling result sets and transaction
- Introduction to AWS cloud

## **Overview of cloud computing**

- Introduction to AWS service
- Creating AWS account
- Creating aws and accessing the aws management console
- AWS compute service

## **Overview of EC2**

- Launching and configuring EC2 instance
- Working with amazon machine images(AMI)
- AWS storage service

## **Overview of s3 (simple storage service)**

- Creating and managing s3 buckets
- Data storage and retrieval in s3
- Integration java with aws
- AWS sdk for java

## **Overview of SDK for java**

- Configuring AWS sdk in java project
- Writing java application to interact with aws service

- AWS lambda and serverless computing

## **Introduction to serverless computing**

- Creating and deploying lambda functions
- Triggering lambda function with aws events
- AWS data service

## **Overview of RDS**

- Connecting java application to RDS
- Database management and scaling
- Project and advanced topics
- Building a java web application

## **Overview of java web application**

- Introduction to servlets and jsp
- Integration with aws service with a web application

## **AWS identity and access management (IAM )**

- Securing AWS resource
- Best practices for security in aws
- Project