

## **(UXD001) – Diploma in Advanced Java Programming**

**Duration: 360 Hours**

**Program Objective**

### **Java SE 8 : (60 hours)**

- Identify the basics of Object Orientation
- Basics of Java
- Using Operators ,Decision Constructs and Loop Constructs
- Working with Methods and Encapsulation
- Working with Inheritance
- Handling Exceptions
- Java Class Design
- Generics and Collections
- String Processing
- Exceptions handling
- Java I/O Fundamentals
- Implementing Threads
- Lambda Expressions
- Java Streams
- Date time API

### **Java Web Component Development: (40 hours)**

- Introduction to Java Servlet
- Introduction to Java Server Pages
- Implementing an MVC Design
- Understanding HTTP request / response cycle and servlet lifecycle
- Identify services provided by the web container
- Implement servlet request dispatcher, filters and servlet listeners
- Developing JSP pages using scriptlets, EL and JSTL
- Developing JSP pages using custom tags

### **Oracle SQL 12c : (60 hours)**

- Identify the major structural components of the Oracle Database 12c
- Manage objects with data dictionary views
- Manage schema objects
- Retrieve row and column data from tables
- Run data manipulation statements (DML) in Oracle Database 12c
- Use scalar and correlated sub-queries
- Utilize views to display data
- Write SELECT statements that include queries
- Write multiple-column sub-queries
- Control database access to specific objects
- Create reports of aggregated data
- Create reports of sorted and restricted data
- Create tables to store data
- Display data from multiple tables using the ANSI SQL 99 JOIN syntax
- Employ SQL functions to retrieve customized data

### **Java Server Faces : (32 hours)**

- Configure JSF within the Web Container
- Design views using JSF and EL
- Design custom components using Facelets
- Implement templates
- Design and develop the model using beans or Pojos
- Integrate external resources such as JPA within Web Application
- Integrate navigation flow/ redirection

### **Webservices and REST API: (24 hours)**

- Webservices based on REST principles
- Alternative to SOAP/WSDL
- Understand the structure of JSON
- Benefits of using JSON in Webservices

### **Spring Framework : (60 hours)**

- Introduction to Springs
- Features of Spring Framework and its Architecture
- Installation of Spring Framework'
- Pointcuts and its types
- Spring Core
- Aspect Oriented Programming(AOP)
- Different types of configuration
- Spring DAO
- Spring MVC
- Programmatic and Declarative Transactions

### **Junit: (16 hours)**

- What is test and testcase
- What is unit testing
- Why we need unit testing
- Introduction to Junit
- Advantage of Junit
- Unit test case using Junit examples

### **Value Added Tools : (68 hours)**

- Software Analysis and Design
- Code Quality Metrics
- Git- Version Control tool

### **Prerequisite**

- Knowledge about Windows Environment
- Logic Building and problem solving skills

### **Certificate Title**

Diploma in Advanced Java Programming

UX Business Solutions Pvt Ltd.



## **Global Certification Mapped**

Exam Number: 1Z0-808

Exam Title: Java SE 8 Programmer I

Exam Number: 1Z0-809

Exam Title: Java SE 8 Programmer II

Exam Number: 1Z0-899

Exam Title: Java EE 6 Web Component Developer Certified Expert

Exam Number: 1Z0-061

Exam Title: Oracle Database 12c: SQL Fundamentals

**ALL THE BEST**