

(UXD002) – Diploma in Internet of Things

Duration: 240 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

Oracle Internet of Things : (60 hours)

- Getting Started with Internet of Things
- Setting Up Development Environment for IoT
- Getting started - Java, Java ME, NetBeans 8.1 IDE ,Python
- Basics of Electronics, Raspberry Pi and sensors
- Setting Up Software Components on Raspberry Pi
- Deep Dive into Java ME8 and RaspberryPi For IoT
- Building Java ME IMlets Programs for IoT
- Digital and Analog Sensors
- Communication Pattern and Protocols
- CLDC Overview
- Accessing Sensors by Using the Device Access API
- Using the Logging API
- Generic Connection Framework (GCF)
- Application Management System (AMS)
- Storing Data by Using the Record Management System
- Security Measures used in IOT
- IoT Architecture
- Cloud Overview

Value Added Tool : (20 hours)

- Git- Version Control tool

Prerequisite

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

Certificate Title

Diploma in Internet of Things

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