

Diploma in Internet of Things (DIoT)

Java SE 8 Programming

- ❖ Creating high-performing multi-threaded applications
- ❖ Creating Java technology applications that leverage the object oriented features of the Java language, such as encapsulation, inheritance, and polymorphism
- ❖ Implementing input/output (I/O) functionality to read from and write to data and text files and understand advanced I/O streams
- ❖ Executing a Java technology application from the command line
- ❖ Manipulating files, directories and file systems using the JDK NIO.2 specification
- ❖ Creating applications that use the Java Collections framework
- ❖ Performing multiple operations on database tables, including creating, reading, updating and deleting using both JDBC and JPA technology
- ❖ Searching and filter collections using Lambda Expressions
- ❖ Implementing error-handling techniques using exception handling
- ❖ Using Lambda Expression concurrency features
- ❖ About Streams in Java 8.

IoT using Java

- ❖ Getting Started with Internet of Things
- ❖ Setting Up Development Environment for IoT
- ❖ Getting started - Java, Java ME, NetBeans 8.1 IDE ,Python
- ❖ Basic 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

Python Programing

- ❖ Introduction to Python
- ❖ Different Modes in PYTHON
- ❖ PYTHON NEW IDEs
- ❖ Variables in Python
- ❖ String Handling
- ❖ Python Operators and Operands
- ❖ Python Conditional Statements
- ❖ Python LOOPS
- ❖ Learning Python Strings
- ❖ Sequence or Collections in PYTHON
- ❖ Python Lists
- ❖ Python TUPLE
- ❖ Python Sets
- ❖ Python Dictionary
- ❖ Python Functions
- ❖ Advanced Python
- ❖ Python Modules
- ❖ Packages in Python
- ❖ Python Date and Time
- ❖ File Handling
- ❖ Python OS Module
- ❖ Python Exception Handling
- ❖ More Advanced PYTHON
- ❖ Python Class and Objects

Internet of Things using Python

- ❖ What is Raspberry Pi Computer?
- ❖ Raspberry Pi Board
- ❖ Features of Raspberry Pi
- ❖ Installing OS in Raspberry Pi
- ❖ Operating System Configuration
- ❖ Network Setup of Raspberry Pi
- ❖ Sensor interfacing
- ❖ Communication protocol
- ❖ Implementation of IoT
- ❖ Thingspeak App

IoT Using Arduino IDE

- ❖ Introduction to Arduino IDE
- ❖ Arduino with C-Programming
- ❖ Understanding Arduino Libraries
- ❖ Hands on with NodeMCU esp8266
- ❖ Sensor interfacing
- ❖ Implementation of IoT
- ❖ Thingspeak App
- ❖ Blynk app

Oracle Database 12c : SQL Fundamentals

- ❖ 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

Data Analytics tools and libraries

- ❖ What is cloud Computing
- ❖ Cloud Infrastructure and Advantage
- ❖ Examples of Cloud Services
- ❖ Thingspeak Cloud Connectivity
- ❖ AWS IoT Cloud Connectivity
- ❖ Creating Simple Dashboards

Data Analytics tools and libraries

- ❖ Data Exploration using R and python
- ❖ Data Visualization Overview
- ❖ Introduction to ML platform

- ❖ Classification using Decision Tree Algorithm in R and python
- ❖ Classification - Sentiment Analysis
- ❖ Regression using R and python
- ❖ Clustering using R and python

IIoT

- ❖ Industrial 4.0
- ❖ Automation of Industry - Basics

UX Business Solutions