QT Application development for Embedded Systems Workshop
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- Objectives:
  - Develop good understanding about Qt for Embedded Linux
  - Learn how to setup Qt for Embedded Linux
  - Gain knowledge about Qt for Embedded for different versions of Qt
  - Learn to develop, build, deploy and debug Embedded Application using Qt

- Duration:
  - 2 days (One weekend)
  - 4 session (Duration of each session: 3 to 3.5 hours)

- Platform:
  Any Linux Platform supporting QT (Preferably Ubuntu)

- Delivery method:
  Workshop based approach with demo and hands-on exposure

- Pre-requisites:
  Knowledge about Qt programming using C++

- Detailed course contents:

  ✔ Overview and Architecture
    - Introduction
    - Architecture - Qt for Embedded Linux
    - Qt versions

  ✔ Qt Toolchain Generation and Installation
    - Qt Toolchain Generation
    - Qt SDK Installation
    - Qt Creator Installation and Setup
    - Configure Target Connection and Toolchain
      - Create New Device Configuration
      - Setup New Build & Run Configuration

  ✔ Create Qt Project and Application for target
    - Create New Qt Project
    - Selecting the target option
✓ Build Your Project and Deploy Application
  ▪ Build Your Application.
  ▪ Deploy Application Binary to Target

✓ Run and Debug Your Application on the Target
  ▪ Run Your Application
  ▪ Debug Your Application

✓ Qt for Embedded Linux Classes
  ▪ Important Qt classes for Embedded Linux

✓ Qt Platform Abstraction
  ▪ Platform Plugins for Embedded Linux Devices
  ▪ Input handling
  ▪ Fonts
  ▪ Platform Plugins for Windowing Systems
    o XCB
    o Wayland

✓ Boot to Qt and Emulator
  ▪ Setting up Boot to Qt
  ▪ Setting up Emulator
  ▪ Using the Emulator

✓ Developing an embedded application using sensors
  ▪ Creating Charts/Graphs in QT
    o Plotting charts with static data
    o Zooming
    o Placing widgets on charts
  ▪ Reading sensor data
    o QT sensor classes
    o Plotting charts with real time data from sensors