

## **Foundations of RISC-V Assembly Programming (LFD117x)**

A basic understanding of the assembly language with RISC-V is vital for hardware-related programming. Tasks like debugging and identifying performance-critical program sections are easier to achieve with the foundations of Assembly.

**Duration:** 2 Days

### **Prerequisites for this course**

System prerequisites:

- Learners will need either a RISC-V system running Linux or a system for running QEMU.

### **Outline for this course**

Chapter 1 – General Information about Assembly Language

Chapter 2 – Development Environments

Chapter 3 – RISC-V Unprivileged ISA

Chapter 4 – Programming RISC-V Assembly

Chapter 5 – Using the System and Libraries

Chapter 6 – Examples

Chapter 7 – Monitoring Host Metrics

Chapter 8 – Monitoring Container Metrics

Chapter 9 – Instrumenting Code

Chapter 10 – Building Exporters

Chapter 11 – Advanced Querying

Chapter 12 – Relabeling

Chapter 13 – Service Discovery

Chapter 14 – Blackbox Monitoring

Chapter 15 – Pushing Data

Chapter 16 – Alerting

Chapter 17 – Making Prometheus Highly Available

Chapter 18 – Recording Rules

Chapter 19 – Scaling Prometheus Deployments

Chapter 20 – Prometheus and Kubernetes

Chapter 21 – Local Storage

Chapter 22 – Remote Storage Integrations

Chapter 23 – Transitioning From and Integrating with Other Monitoring Systems

Chapter 24 – Monitoring and Debugging Prometheus