Software Architecture & Design

Course Details

Software architecture is not just putting together existing packages as if they were building blocks. It's a considered approach to design, which helps systems scale with your business and helps your team develop in a more agile way. This course explains what software architecture really is, how it can help you build better applications, and the relationship architecture has to implementation, design, and construction. This course also covers Conway's law and domain-based thinking, the differences between system and enterprise architecture, and six of the most common architectural patterns, from monoliths to micro services.

Course Objectives

* Familiarize participants with software architecture concepts and principles
* Introduce participants to the relevance and role of software architectures and their impact on an organization
* Provide participants with examples of software architectures in practice through case studies

Course Outcomes

Participants will have a better understanding of

* The relationships between system quality attributes and software architectures
* Software architecture patterns and tactics, and their relationship to system quality attributes
* Software architecture artifacts and documentation
* Software architecture design
* Software architecture evaluation
* Architectural reuse
* How architecture practices relate to agile practices

Prerequisite

Participants should have an understanding of

* The software development lifecycle
* Modern software engineering concepts

Course Strategy

* Lectures will be used to introduce concepts.
* Case studies will be used to illustrate architectural principles in practice.
* Discussion sessions and group exercises will be used to engage students.