GEMRAIN
C O N S U L T I N G

SOFTWARE ARCHITECTURE
Duration: 4 days; Instructor-led

COURSE DESCRIPTION
Software architects mastered the value, use, development and delivery of software intensive systems. They have developed skills in software development lifecycles, software engineering and software design.

Software architect are responsible for the value generated from a particular software system or system of systems. They work along-side business and information architects to ensure that particular business units maximize their technology investment.

This course is delivered in instructor-led format. Each day the course instructor will guide students through various base skills and definitions, discussions and recommended software architecture best practices for delivery of business technology strategy and values. Student's progress through detailed definitions and ontology, instructor and student led discussions, hands-on workshops and industry case studies.

AUDIENCE
- System Analysts.
- Programmer Analysts.
- Software Engineers.
- Project Leaders.
- Project Managers.
- SQA Managers.
- Testers.
- IT Analysts.
- Software Designers.
- Technical Advisors.
- Software Consultants.
- Software Configuration Managers.
- Web Analysts.

PREREQUISITES
Candidate must have taken 4-days Business Technology Strategy.

KEY BENEFITS
- be able to apply rigorous software design methodology that consistently yields the right level of technical design documentation and develop technical solutions that conform both the customer requirements and software development standards.
- Be able to review and optimized software designs based on rigorous understanding of costs and returns based on the business needs and wants.
- Be able to recommend software architecture prioritization through the project implementation process to demonstrate component selection and prototyping.
- Be able to utilize understanding of industry software trends to innovate and provide new project/ product ideas within the technology investment lifecycle and ensure software reusability.
- Be able to communicate software design concepts in the business context to all levels of management in revealing the business values of the technology investment in the software system.

KEY CONTENT

Module 1: Software Architecture Fundamentals
- Roles and Teams.
- Viewpoint Considerations of the Software Architect & Terminology.
- Software Architecture Principles.
- System Structures.

Module 2: Software Construction
- Application Development and Visualization.
- Programming Patterns.
- Software Construction.
- Technology Platforms.

Module 3: Components, Frameworks and Tools
- Client Programming and User Experience (UX).
- Client, Server and Storage Technologies.
- Workflow.
- Database Programming.

Module 4: Service Network
- Asynchronous and Synchronous Distributed Computing.
- SQA.
- Messaging, SML and B2B.
- Application and Service Management.

Module 5: Architectural Process, Methods and Artifacts
- Modeling.
- Applying Design Patterns.
- Code Quality Analysis.
- Design Patterns Selection and Application.

Module 6: Architecture throughout the lifecycle
- Software Architecture Governance.
- Working with other Architects.
- SLC. What it means to the Software Architect.
- Professional Growth and Mentoring.