Software Development Life Cycle (SDLC)

Module 1: Understanding SDLC

- What is SDLC?
  - ✓ Definition and purpose
  - ✓ Importance in software development
- Key SDLC Models
  - ✓ Waterfall model
  - ✓ Agile model
  - ✓ Iterative model
  - ✓ Vmodel
  - ✓ Spiral model

Module 2: Planning Phase

- Project Initiation
  - ✓ Gathering requirements
  - ✓ Feasibility study
  - ✓ Defining objectives and scope
- Project Planning
  - ✓ Creating a project plan
  - ✓ Risk assessment and management
  - ✓ Resource allocation

Module 3: Implementation Phase

- Design and Development
  - ✓ System design
  - ✓ Coding standards and best practices
  - ✓ Code reviews
- Building and Integration
  - ✓ Building the software
  - ✓ Integration testing
  - ✓ Continuous integration

Module 4: Testing Phase

- Types of Testing
  - ✓ Unit testing
  - ✓ Integration testing
  - ✓ System testing
  - ✓ User acceptance testing
  - ✓ Regression testing
- Test Planning and Execution
  - ✓ Test strategy
  - ✓ Test cases and scenarios
  - ✓ Test automation

Module 5: Deployment Phase

- Deployment Strategies
  - ✓ Manual deployment
  - ✓ Automated deployment
  - ✓ Rollback plans

Module 6: Maintenance and Conclusion

- Post Deployment Maintenance
  - ✓ Bug tracking and fixing
  - ✓ Performance monitoring
  - ✓ Security updates
- SDLC Best Practices
  - ✓ Reviewing the entire SDLC process
  - ✓ Continuous improvement
  - ✓ Case studies and real-world examples