

Day - 1

- **Introduction to Magentic-One Framework**

- Overview of multi-agent systems and their role in automation.
- Key features and benefits of the Magentic-One Framework.
- Use cases and applications across industries.
- Hands-On Lab: Setting up the Magentic-One development environment.

- **Architecture and Components**

- Core components: Agents, workflows, and routines.
- Understanding the agent lifecycle: Creation, task execution, and termination.
- Overview of task coordination and agent communication.
- Hands-On Lab: Developing and running a basic agent.

- **Designing and Implementing Agents**

- Defining agent capabilities and roles.
- Implementing agent-to-agent communication protocols.
- Error handling and recovery in agent-based systems.
- Hands-On Lab: Building an agent for task automation.

- **Automating Complex Workflows**

- Designing workflows with task allocation and prioritization.
- Using routines to manage dynamic task pipelines.
- We are implementing multi-agent collaboration for large tasks.
- Hands-On Lab: Automating a multi-step workflow with Magentic-One.

- **Integration with APIs and External Tools**

- Leveraging APIs to extend agent functionality.
- Best practices for secure authentication and data sharing.
- Real-world examples of API integration in agent workflows.
- Hands-On Lab: Connecting an agent to a third-party API.

- **Scaling and Optimizing Deployments**

- Strategies for deploying agent systems on Azure and other cloud platforms.
- Monitoring and performance tuning for agent-based systems.
- Cost management and optimization techniques.
- Hands-On Lab: Deploying and scaling a workflow on the cloud.

- **Certification Preparation and Q&A**

- Recap of key concepts and practical applications.
- Practice certification exam with sample questions.
- Q&A session to address advanced topics and challenges.
- Hands-On Lab: Certification readiness exercise.