

# Lab Exercise: Exploring Microsoft Azure and Cloud Computing Fundamentals

## Objective:

This lab exercise is designed to provide hands-on experience with Microsoft Azure, focusing on understanding the fundamentals of cloud computing, navigating the Azure Portal, and differentiating between public, private, and hybrid cloud models. By the end of this lab, participants will have a clear understanding of cloud computing benefits, cost management in Azure, and the core services Azure offers.

## Expected Outcome:

- Participants will be able to articulate the differences between CapEx and OpEx models in cloud computing.
- Participants will demonstrate proficiency in navigating the Microsoft Azure Portal, understanding service utilization, and managing costs.
- Participants will differentiate between public, private, and hybrid clouds and identify appropriate use cases for each.
- Participants will gain hands-on experience with core Azure services, understanding their application in real-world scenarios.

## Prerequisites:

- An active Microsoft Azure account.
- Basic understanding of cloud computing concepts.

## Lab Exercise Details:

### **Part 1: Overview of Cloud Computing**

- **Task 1.1:** Research and list at least five benefits of cloud computing over traditional on-premises infrastructure.
- **Task 1.2:** Describe the CapEx and OpEx models of financing IT infrastructure, providing examples of when each model might be preferred.

### **Part 2: Understanding Public, Private, and Hybrid Clouds**

- **Task 3.1:** Create a brief report differentiating between public, private, and hybrid clouds. Include a diagram that represents each cloud model.
- **Task 3.2:** For each cloud model, list one real-world application or scenario where that model would be the most appropriate choice.

## **Submission Guidelines:**

- Compile your findings, screenshots, and any scripts or code used into a report.
- Your report should clearly indicate which tasks have been completed and include a reflection on what was learned during each part of the exercise.
- Submit your report through the designated submission portal or email to your instructor by the deadline.