Lab 1:

2) Reasons for success : a) scalability, can be added to / taken from when needed
b) Cost efficient, lessens the need for expensive hardware.
c) Accessibility, Cloud services can be accessed across the whole world.
Pros: Scalable, Cost efficient, Automatically updates, good for handling maintenance.
Cons: Security risks, sensitive data is stored in a cloud, Downtime issues, dependant on internet connection, Limitted control, users rely on cloud providers.

3) A hypervisor manages virtual machines by allocating hardware resources and ensuring isolation between VMs.
4) A virtual machine is a software-based emulation of a computer that runs an operating system and applications independently from the host system.
5) Benefits: VMs run independently this prevents crashing from affecting other systems. Portable, can be easily moved across systems, Cost Savings : Reduced need for physical parts and equipment. Testing + development : Provides safe environment for testing and development.
6)
Software Development & Testing – Testing applications in different OS environments.
Server Virtualization – Running multiple servers on a single machine.
Cloud Computing – Hosting cloud-based applications.
Security Sandboxing – Running suspicious applications without affecting the main system.
Legacy Software Support – Running old applications on modern hardware.
7)(b) The operating system installed on a virtual machine.
8)(c) Virtual machines run independently and are isolated from each other and the host system.
9)(c) It allows virtual machines to be moved between different physical machines with compatible hypervisors.
10) Cloning a VM creates an exact copy, which can be used for backup, testing, or deploying multiple identical environments quickly.