# Cloud Data Centres Lab 1

1. Virtualisation is enabled.
2. The cloud has various upsides such as:
   1. Users being able to rent out computer resources.
   2. Provides excellent scalability.
   3. They are reliable and you only need to pay for what you use.

Cons Include:

a. Security concerns.

b. Depends on the internet.

c. Can be time intensive to move from one cloud provider to another.

1. A hypervisor creates and manages virtual machines. It abstracts the underlying hardware to allow for guest operating systems to run concurrently.
2. A virtual machine is a software emulation of a physical computer.
3. There many benefits to virtual machines, these include:
   1. Isolation: Each VM is isolated/sandboxed from others reducing risk of cross contamination between tools and libraries.
   2. Resource efficient: Multiple machines can share the same physical server.
   3. Portability: VMs can be copied or backed up on other machines.
   4. Cost effective: Less physical hardware is needed.
4. Five use cases include:
   1. Testing: developers can test applications independently.
   2. Server consolidation: Companies can reduce the number of physical servers.
   3. Legacy application support: Run older versions of software that might not be supported on new machines.
   4. Backups: VMs can be backup.
   5. Security: Run risky applications on isolated machines.
5. B) The operating system installed on the virtual machine.
6. C) Virtual machines run independently and are isolated from each other and the host system.
7. C) It allows virtual machines to be moved between different physical machines with compatible hypervisors.
8. The purpose of cloning a VM is:
   1. Quick deployments
   2. Easy testing and safe testing.
   3. Creating backups.