**Introduction Chapter 1**

**What is cloud computing?**

Is the on-demand delivery of IT resources over the internet with pas-as-you-go pricing.

**Deployments models for clouding computing**

1. **Cloud-based Deployment**

* Runs all parts of the cloud in the cloud.
* Migrate existing applications to the cloud.
* Design and build new application in the cloud.

You can build this application in a low-level infrastructure that requires you IT staff to manage them or high-level infrastructure service that reduce management, architecting, scaling requirements of the core infrastructure.

Example -> a company might create an application consisting of virtual servers, databases, and networking components that are fully based in the cloud.

1. **On-premises Deployment**

* Deploy resources by using virtualization and resource management tools.
* Increase resources utilization by using application management and virtualization technologies.

**On-premises Deployment**

Is also known as a private cloud deployment. In this model, resources are deployed on premises by using virtualization and resource management tools

Example -> you might have applications that run on technology that is fully kept in your on-premises data centre. Though this mode is much like legacy IT infrastructure, its incorporation of application management and virtualization technologies helps to increase resources utilization.

1. **Hybrid Deployment**

* Connect cloud-based resources with legacy IT applications
* Integrate cloud-based resources with legacy IT applications

**A Hybrid Deployment,** cloud-based resources are connected to on premises infrastructure.

Example -> You have legacy application that are better maintained on premises, or government regulations require your business to keep certain records on premises.

**Benefits of cloud computing**

1. **Trade upfront expense for variable expense**

**Upfront expense ->** refers to data centres, physical servers, and other resources that would need to invest in before using them.

**Variable expenses ->** means you only pay for computing resources you consume instead of investing heavily in data centres and servers before you know.

1. **Stop spending money to run and maintain data centres**
2. **Stop guessing capacity**
3. **Benefits from massive economies of scale**
4. **Increase speed and agility**
5. **Go global in minutes**