Cloud Computing SIT113
Practical 1: Introduction
Overview of Virtualization and Cloud Computing

Aims and Objectives

In this week's practical we will be introduced to cloud Computing and virtualization and understand the basic difference between the two.

You will develop an understanding of how Cloud computing can provide useful infrastructure and scalability for IT applications. This will provide background knowledge for future practicals where we will examine the installation and configuration of the underlying technologies,

Background of Virtualization

Virtualization technologies have been used in the information technology fields for many years and their origins can be traced back many years to mainframe computer operating systems such as the CP/CMS and IBM VM operating systems of the 1960s and 1970s. The progressive miniaturization and commoditization of computing technologies led to cheaper and more powerful computing options than mainframe computers, such as the introduction of the IBM Personal Computer in 1981 and the rapid development of such computers that followed.

In the 1990s, virtualization technologies started to regain prominence, providing the ability to run multiple operating systems on a single computer which was useful for providing access to other platforms, e.g., running Windows on top of a Linux operating system or vice-versa, and the ability to experiment which was particularly useful in testing software development projects and testing deployment of applications software in a managed desktop environment.

What is virtualization?

https://youtu.be/uAhhM0L-MtE

https://youtu.be/hPkEqOoQSu4

Background of Cloud Computing

A *cloud* refers to a distinct IT environment that is designed for the purpose of remotely provisioning scalable and measured IT resources. The term originated as a metaphor for the Internet, which is, in essence, a network of networks providing remote access to a set of decentralized IT resources. Prior to cloud computing becoming its own formalized IT industry segment, the symbol of a cloud was commonly used to represent the Internet in a variety of specifications and mainstream documentation of Web-based architectures.

What is Cloud Computing?

https://youtu.be/QJncFirhjPg

https://youtu.be/SgujaIzkwrE

Cloud Computing Vs Virtualization:

https://youtu.be/14KJoDs6reg

Your Task:

- In groups of 3s discuss your understanding of cloud computing.
- List 5 advantages of cloud computing
- In your own words discuss the basic difference between Cloud computing and virtualization.
- Upload your group discussion to the portal under week one discussion thread.