**Reading Assignment – 1**

**Greeshmika korrapati(U00932594)**

**Cloud Computing:**

It has overtaken the typical mechanism of providing industry implementations and chosen resolutions for organizations expanding their infrastructures or by initiating unconventional ideas. It is basically emanating technology which is gaining extensive impact on information technology industry. Cloud computing is providing access for data, preserving data and programs on internet instead of storing them on hard drives of a computer. This can be organized according to the requirement of company either from multiple places or from single site. There are predominantly three kinds of cloud public, hybrid and private clouds. When services provided over network is extended for public utilization then that is a public cloud. When a cloud infrastructure is specially operated for a private company whether it is controlled internally or a third party takes a hold of it, such type is known as private Cloud. In case of Private clouds security concerns would be more, every step in the project should be handled carefully to avoid vulnerability. Hybrid cloud is nothing but combination of both private and public clouds that is it could be designed in such a way that a part of it could be public and a part could be private, Management will be able to design it according to their requirement. Cloud is also classified according to their services that they provide such as Software as a service, Platform as a service, Infrastructure as a service, Function as a Service.

Cloud Computing provides various advantages for IT business due to its flexibility. It basically reduces the cost as it has characteristic of pay for use it helps organization to avoid investing on unutilized resources and workloads. It also avoids maintenance and service costs. It provides flexibility of moving workloads from cloud or to cloud. organizations can scale up and decrease according to their need. Cloud could be designed based on their business requirement as multiple platform clouds and could be utilized from different locations. They also can help in running certain works continuously as a prioritized task. They provide rapid and productive storing and retrieving of Data. Cloud is developed in such a way that it could be utilized in any device and united with any applications. This also stores Data even after a critical damage due to disaster or sudden power loss as data is backed in cloud it provides a continuity of business. Because of its collaborating efficiency Cloud gives ability for communicating and sharing any data outside more easily. It also provides access to automatic updates and this comprises software version up to date.

As cloud Computing service for different business organizations simultaneously at times their would-be fluctuations in performance. They would be technical issues as it is susceptible. As cloud works on internet a good network for internet connection is required and it could not be accessed without internet. Few providers of cloud have limitations for bandwidth and if organization exceeds it then they charge comparatively very high. Another Major drawback of cloud computing is security issues, we should know that we are giving all our information for cloud providers and there is lot of risks involved in this. when organization thinks of moving from one cloud to another this involves lot of complications with differences in paths of vendors. Companies could have restricted control when compared to traditional business as cloud provider manages and have entire control. Predominant advantage of cloud computing is its breakdown time, Cloud provider might at times get technical interruptions such as maintenance issue, loss of power etc.,

Security in cloud is one of the major disadvantages but there are different practices now-a-days to avoid it for a certain level. Cloud security controls must react to environmental variables of environment and follow work fluctuations and data during pause mode and in movement, as inherent parts of the workloads or in a dynamic way by cloud management system and APIs. This aids to secure environment of cloud from attacks and loss of data. There are different ways they are avoiding security attacks by detecting any threats in prior, providing limited access for data, providing identity access, doing encryption of data, doing vulnerability testing as well as penetration testing. Tracking cloud providers and resources, taking care of deleted data in cloud, avoid access for unauthorized users. Using hybrid clouds also reduces risks for certain level since there are numerous environments involved it aids in loosing data easily.