The Era of Cloud Computing

~Gargi Sharma

The advancement of technology encompassing networks, storage and processing power led to the epitome of computing and in this century we call it cloud computing or commonly referred to as cloud.

The term “cloud” is commonly used in science to describe an agglomeration of particles which can be just observed from a distance. Technically the term “cloud” is a metaphor in the world of internet, which means an invisible space on the internet where, we as users, can store and access data instead of the hard disk storage .What you don’t deal here with, is the physical proximity of the stored data on your hard disk. When you store data on your hard disk, it is known as local storage. It means that the data you stored is available to you physically and the access of that data is fast on that particular computer or on the local network.

The term “cloud” dates back to the time when a cloud like schematic representation was used to denote the connections of any computer or telecommunication network. Eventually the term took on a new meaning giving the World Wide Web new horizons to touch! The underlying concept in this is that with cloud computing you are trying to separate the applications and softwares from the operating system and hardware that runs everything.

Some cloud computing characteristics include on demand service, network access, shared resources and scalability.

Today, almost every bit of data- whether it is the photographs of your last college trip, or the songs that make you fall asleep every night, or your crazy marriage videos or the recording of your child's first cry, everything can be stored and accessed on cloud computing softwares without the worry of storage space. But this meaning of cloud computing is limited only till your personal space. When it comes to business, the meaning changes with the expansion of brand.

There are 3 major models of cloud computing:

1. **Software-as-a-service:** Software as a service or SAAS as it is commonly referred is an on demand service or pay-per-use of application service. In this an application is being subscribed by a business over the internet. This is an independent platform and it is available for multiple users at a time. Here all the cloud computing resources are entirely managed by the vendor. It can be accessed only by a web browser or a lightweight client application. For example: Facebook. Twitter etc.
2. **Infrastructure-as a-software:** Infrastructure as a service or IAAS as it is commonly referred offers the computing architecture and infrastructure .All the computer resources are built in a virtual environment so that multiple users can access them. These resources include data storage, virtualization, servers and

networking. In this large companies like Amazon and Microsoft rent space to other budding companies. For example Amazon web services, Rackspace.com etc.

3. **Platform-as-a-service**: Platform as a service or PAAS as it is commonly referred is made up of a programming language environment, a web server and a database .All of this encapsulates an environment where users can build, compile and run their programs without worrying about the underlying infrastructure. In this you manage data and application resources and all other resources are managed by the vendor. For example: Google app engine, Force.com etc.

However some people still argue with the fact that cloud computing is superior to local storage which was conventionally used. There are arguments like “who owns the data stored on the cloud?”, and “ how can cloud computing be cheaper than local storage because it is well known fact that storing data on hard disk is much cost worthy than storing data on internet!”

Along with this time and again, there have been controversies against big cloud computing players like Facebook and Instagram on what do they do with our pictures and who stores them and where!! And then there is no central governing body declaring guidelines for the cloud computing softwares!

So on one side, where cloud computing is something that can help the world of internet and web developers, reach

the pinnacle and every company is gradually moving towards cloud, on the other side it can also cause safety issues by not answering some very obvious personal questions!!