**Azure fundamental assignment 1**

* **What is cloud computing? What is Azure?**  
  **Ans -**   
  A cloud is a computer system that provides computing resources in the form of Data Storage(SQL Database, PostgreSQL, Cosmos DB etc), Compute power on-demand, without any intervention from the user side. By reducing the need for on-premises hardware, cloud computing is helpful to the organization.  
   The Azure is the cloud platform from the Microsoft. It contains the cloud services which would be helpful for the organizations to build, run the hardware solutions across multiple clouds. Azure contains the solutions which includes IaaS(Infrastructure as a Service), PaaS(Platform as a Service), and SaaS(Software as a Service) that can be used for services such as analytics, virtual computing, storage, etc.
* **How to create an Azure account list the steps and requirements?**  
  **Ans -**  
   1. Go to [https://www.azure.com](https://www.azure.com/) and click on the Start free button  
   2. If you already have an account with Microsoft then you can do the Login otherwise register.  
   3. When registrating we have to fill in the details like first name, last name, phone no, credit/debit card details and so on.

4. Once all of details are filled in we can click on Sign up.

* **Describe different types of cloud models.**  
  **Ans -**   
    
   There are two different types of cloud models - a) Deployement Model b) Service Model.  
    
  a) Deployement Model - It consist of three different types -   
   i) Public Cloud - This type of cloud deployement model supports all suers who want to make use of computing resource such as hardware, software and also on subscription basos.  
    
   ii) Private Cloud - This is typically for the single organization. Private clouds are more expensive than the public clouds since it requires the capital expenditure involved in acquiring and maintaining them. In terms of security private clouds offer more security than that of public clouds.  
    
   iii) Hybrid Cloud - In the hybrid clouds organization can make use of both Private as well as Public cloud advantages.

b) Service Model - It consist of three different types -   
 i) IaaS(Infrastructure as a Service) - It can be defined as the use of servers, storage, computing power, network and virtualization to form utility like services for users. It provides virtual computing resources to the users through resource pool.

ii) PaaS(Platform as a Service) - It can be defined as a computing platform that allows the users to create web applications quickly and easily without having to buy or maintain the software and infrastructure.

iii) SaaS (Software as a Service) - It is a way of delivering the applications over the Internet. Instead of installing and maintaining the software on- premises, you can simply access it via the Internet, freeing yourself from complex software and hardware management.

* **Describe different cloud services.**  
  **Ans -**   
  i) IaaS(Infrastructure as a Service) - It can be defined as the use of servers, storage, computing power, network and virtualization to form utility like services for users. It provides virtual computing resources to the users through resource pool.  
    
  ii) ii) PaaS(Platform as a Service) - It can be defined as a computing platform that allows the users to create web applications quickly and easily without having to buy or maintain the software and infrastructure.  
    
  iii) SaaS (Software as a Service) - It is a way of delivering the applications over the Internet. Instead of installing and maintaining the software on- premises, you can simply access it via the Internet, freeing yourself from complex software and hardware management.
* **What are some cloud computing advantages?**  
  **Ans -**   
  Before the cloud computing we need to maintain the servers, monitoring servers, traffic etc on the on-premises hardware. The whole setup of this is expensive. Troubleshooting problems can be tedious and may conflict with the business goals. Since the traffic is varying the servers will be idle for most of the time.  
   Cloud computing is usefull for small as well as large IT companies. To overcome all the above problems we can use cloud computing and move this on-premises hardware, maintenence on the cloud and let the cloud providers handle this on behalf of us.   
   Advantages include i) Backup and restoring the data ii) Collaborarting with the people on global level can be done. iii) Low maintence cost iv) Data Security etc.
* **Differentiate Capital expenses vs. operating expenses  
  Ans -** Operating Expenses - It is an expense which is required for the day to day functioning of the service. This occurs on the recurring basis. It can include the maintenance cost, subscription fees etc. The payment timelines are shorter here and hence the changes can be done frequently if want so. Capital Expenses - It is an expense which is designed for the long term and not to day to day functioning of the service. This includes the costs on Virtual Machines, Servers, and Data centers. Here the expense is upfront and hence are locked into long term commitment and can't make changes easily.