**Day 2: Assignment**

**1. What are the 3 fundamentals of AWS pricing?**

**Ans:** There are three fundamental drivers of cost with AWS**: compute, storage, and outbound data transfer**

**Compute** – Amount of resources used with the duration and the different capacity requested by an user or a organization

**Storage:** The volume requested by an user or an organization for data storage and backup, every storage option comes with a cost as storage occupies space on a server

**Outbound data transfer –** Charges for the data being transferred by the clients through their resources

**2. What is a region?**

**Ans**: AWS has the concept of a Region, which is a physical location around the world where they cluster data centers. Each group of logical data centers known as Availability Zones. Each AWS Region consists of multiple, isolated, and physically separate AZs within a geographic area. Unlike other cloud providers, who often define a region as a single data center, the multiple AZ design of every AWS Region offers advantages for customers. Each AZ has independent power, cooling, and physical security and is connected via redundant, ultra-low-latency networks. AWS customers focused on high availability can design their applications to run in multiple AZs to achieve even greater fault-tolerance. AWS infrastructure Regions meet the highest levels of security, compliance, and data protection.

Creating an AWS account would be under a global region as the accounts are unique and the regions can be selected by the user or an organization based on the needs where the data needs to be stored.

**3. What is an Availability zone?**

**Ans**: An Availability Zone (AZ) is one or more discrete data centers with redundant power, networking, and connectivity in an AWS Region. AZs give customers the ability to operate production applications and databases that are more highly available, fault tolerant, and scalable than would be possible from a single data center.

All the Availability zones within a AWS region are inter connected with high bandwidth cables and the traffic between the availability zones are encrypted to keep the data secure.   
  
 Each availability zone is isolated from one other to ensure a backup is always available to retrieve data whenever there’s an issue with the other data center, where in loss of data due to natural disaster, power outages.

**4. What is points of presence?**

**Ans**: A point of presence (PoP) is access point, or physical location at which two or more networks or communication devices share a connection.

A common example is an ISP point of presence, the local access point that allows users to connect to the Internet with their Internet service provider

**5. Explain about Global infrastructure components?**

**Ans:** The AWS Global Cloud Infrastructure is the most secure, extensive, and reliable cloud platform, offering over 200 fully featured services from data centers globally.

The key components of AWS global infrastructure are Availability zones, Regions, Edge locations and Regional Edge caches.

Availability zones: Availability zones are highly available data centers within each AWS region with each availability zone isolated from each other to prevent data loss and enhance security.

Regions: Region is a physical location around the world where AWS data centers are located. Each AWS Region consists of multiple, isolated, and physically separate availability zones.

Edge Locations: A site that cloud uses to cache copies of your content for faster delivery to users at any location.

Regional Edge caches: are provided with larger cache-width than any individual edge location, so users data remain in cache longer at these locations.