Security in the Cloud

1-How to configure, develop and maintain Security and Privacy in cloud?

To configure, develop, and maintain security and privacy in the cloud, it is essential to:
- Implement strong identity and access management using tools like IAM.
- Use encryption for data at rest and in transit.
- Regularly update and patch systems.
- Employ network security measures like firewalls and VPNs.
- Conduct regular audits and compliance checks.
- Ensure data residency and privacy compliance such as GDPR or HIPAA.

2-What is Portability in cloud?

Portability in cloud computing refers to the ability to move applications and data from one cloud environment to another with minimal disruption. This is essential for avoiding vendor lock-in and increasing flexibility.

3-What is Reliability and high Availability in cloud?

Reliability refers to the cloud service's ability to perform consistently well, while high availability ensures that the services remain operational and accessible even during failures or maintenance. Cloud providers achieve this through redundancy, failover mechanisms, and distributed architectures.

4-Describe Mobility Cloud Computing

Mobility in cloud computing allows users to access data and applications from any device and location via the internet. This enhances productivity, collaboration, and flexibility, especially for remote or mobile workforces.

5-Describe AWS, Azure, Google cloud Platforms

Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP) are the leading cloud service providers:
- AWS: Offers a wide range of services including computing, storage, databases, and AI.
- Azure: Integrated with Microsoft products and offers enterprise-grade services.
- Google Cloud: Strong in data analytics, AI, and machine learning capabilities.

6-Accessing AWS, Azure and Google cloud Platforms (any one portal)

To access AWS:
1. Go to https://aws.amazon.com/
2. Click on 'Sign In to the Console'.

3. Enter your credentials or sign up for a new account.
4. Once logged in, use the AWS Management Console to access services.

7-Create compute, create network, create storage on AWS , Azure and GCP

On each cloud platform:
- AWS:
  - Compute: Launch EC2 instances.
  - Network: Use VPC to create isolated networks.
  - Storage: Use S3 for object storage.
- Azure:
  - Compute: Create Virtual Machines.
  - Network: Use Virtual Network (VNet).
  - Storage: Use Blob Storage.
- GCP:
  - Compute: Use Compute Engine.
  - Network: Configure Virtual Private Cloud (VPC).
  - Storage: Use Cloud Storage.

8-Compare Cloud pricing of resources and services on all platform Amazon Web Services (AWS):

Cloud pricing comparison:
- AWS: Pay-as-you-go pricing, reserved instances offer savings. EC2, S3, and Lambda have tiered pricing.
- Azure: Similar to AWS, with discounts on reserved instances and hybrid benefits.
- GCP: Offers sustained use discounts and committed use contracts. Generally cost-effective for compute-intensive workloads.