Assignment 2

1. Describe the significance of AWS.

* AWS is a cloud provider which provide compute,storage,networking and many others services
* AWS enables you to build highly scalable applications.
* It has a scope in different domains which cover a wide set of industry use cases could be in any industries such as Gaming, Website hosting,Backup etc.

1. Explain what EC2 is?

* Amazon Elastic Compute Cloud (Amazon EC2) is a web-based service that allows businesses to run application programs in the Amazon Web Services (AWS) public cloud.
* EC2 is a virtual server also called instances in AWS.you can launch as many as instance you want as per requirements
* Multiple predefined templates present called as AMI(Amazon Machine Image)

There are different type of EC2 instance available in AWS such as

* General Purpose
* Compute Optimized
* Memory Optimized
* Storage Optimized
* Accelerative Computing

1. Explain the working of S3 and list various types of instances.

AWS offers a complete range of cloud storage services to support both application and archival compliance requirements.

AWS S3 is a simple storage and retrieving of any amount of data any time from anywhere on the internet.

S3 is an object based storage you can not store any OS in S3.

Within the S3 service, users create ‘Buckets’. Buckets are used to store object based files and can be thought of as folders. When Buckets are created users specify which region the Bucket should be deployed in. Considerations here are usually cost, expected latency and any security or governance related policies.

Each object uploaded to an S3 bucket is independent in terms of its properties and associated permissions (who can and cannot access the file(s) for example). When individual or groups of files are uploaded to buckets, users specify the type of S3 storage to be used for those specific objects (RRS, IA or standard S3).

With Lifecycle Management S3 users can design lifecycle policies, automatically moving objects from one storage tier to another after a set number of days. These policies can be defined based on when the object was first created or when it was most recently accessed.

1. Explain the importance of IAM in AWS.

AWS Identity and Access Management (IAM) provides fine-grained access control across all of AWS. With IAM, you can specify who can access which services and resources, and under which conditions. With IAM policies, you manage permissions to your workforce and systems to ensure least-privilege permissions.

With IAM, you can manage AWS permissions for workforce users and workloads. For workforce users, we recommend that you use [AWS Single Sign-On](https://aws.amazon.com/single-sign-on/) (AWS SSO) to manage access to AWS accounts and permissions within those accounts. AWS SSO makes it easier to provision and manage IAM roles and policies across your AWS organization. For workload permissions, use IAM roles and policies, and grant only the required access for your workloads.