NEHA BAHL-A003

Practical 3 Writeup:-

· **Users and groups**

Users and groups in AWS are key components of Identity and Access Management (IAM), used to securely control access to resources. Users represent personal identities. Each has unique credentials and permissions. whereas a group is a group of users who share specific permissions. For data science projects Users may have roles that access storage (such as Amazon S3), compute resources (such as EC2), and analytics services (such as SageMaker). Users are grouped by function, such as data scientists or analysts. Helps to streamline permissions Management ensures that each user has appropriate access to data and tools without excessive privileges. This structure helps enforce security best practices. Protect sensitive information and ensuring compliance

· **IAM**

AWS Identity and Access Management (IAM) is a framework for securely managing access to AWS services and resources, enabling the creation of privileged users, roles, and policies. This ensures that only authorized users and applications can access specific resources. For data science, IAM is essential for controlling access to sensitive data stored in services such as Amazon S3, databases, and analytics tools. IAM roles can be used to grant temporary permissions to applications or services, such as Amazon. SageMaker for secure data processing and model training By effectively managing permissions with IAM, data scientists can collaborate. Analyze data and deploy the model safely. while maintaining data security and compliance.

· **Role of IAM**

The role of Identity and Access Management (IAM) in AWS is to ensure secure and orderly access control for users and applications. IAM manages permissions by creating policies for users, groups, and roles that specify access to services. AWS and dedicated data resources In data science, IAM is critical to protecting sensitive datasets and limiting access to resources to only what is needed. With the IAM role, data science applications (housed in Amazon SageMaker) can access data in Amazon S3 safely Or connect to a database for

training models without exposing your credentials. So IAM helps data scientists work efficiently in a secure and compliant environment.