1] Users and Group :- In AWS IAM (Identity and Access Management) users and Groups are fundamental concepts used to manage access to AWS resources.

Users :- An IAM user is an entity created in AWS to represent a person or applicant that interacts with AWS resources. Each user has unique credentials, username, password and optionally access keys for programmatic access.

purpose :- users are created to allow individual people or applications to access AWS resources separately. Each user can be granted specific permissions to perform actions on resources.

Groups :- An IAM group is a collection of IAM users. Groups are used to simplify the management of permissions for multiple users.

purpose :- Groups allow you to assign permissions to multiple users at once rather than assigning permission to individual user. This is particularly useful for organizing users with similar access requirements

2] IAM :- AWS IAM (Identity and Access Management) is a service that helps you securly control access to AWS services and resources. it enables you to manage users, groups and permissions to allow or deny access to AWS

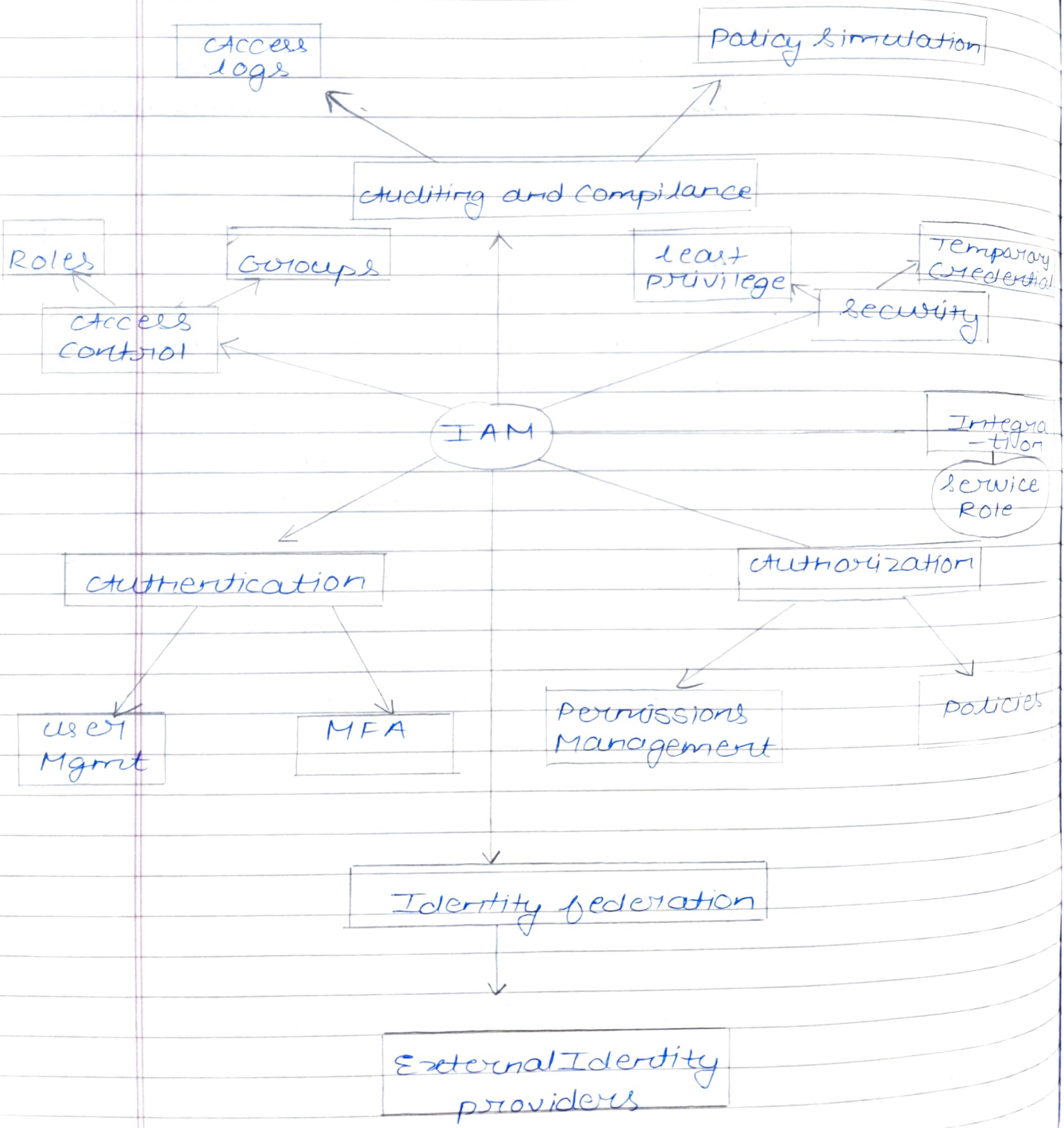
Key features :-

1] User Management :- Create and Manage users and assign security credentials like keys
2] Group Management :- Organize users into groups to manage permissions.
3] Policies :- Use policies to define permissions and specify what actions are allowed or denied these policies are attached to users groups or roles
4] Multi Factor authentication (MFA) :- Enhance security by requiring users to provide additional authentication.
5] Identity federation :- allow external identities to access AWS resource

Benefits

1] Security :- fine grained control over who can access what resources and actions.
2] Scalability :- Manage access for large no. of users and services
3] flexibility :- Integrate with existing identity Management systems
4] Compliance :- Help meet regulatory and compliance req. by managing access controls.

3] Role of IAM


Access logs
Policy simulation
auditing and compliance
Roles
Groups
least privilege
Temporary Credential
Security
Access Control
IAM
Integration
Service Role
authentication
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User Mgmt
MFA
Permissions Management
Policies
Identity federation
External Identity providers