

Assignment -8

- **Create Users:** Create users for each role.

1 user has been granted ADMIN

NAME ↑

SHAKSHILIKHIA

1 user has been granted ANALYST

NAME ↑

JOHN_DOE

1 user has been granted VIEWER

NAME ↑

VIEW_USER

- **Define Roles and Assign Privileges:**
 - **Admin:** Full access to all databases and management tasks.
 - **Analyst:** SELECT privileges on data tables.
 - **Viewer:** Limited read-only access to specific schemas or dashboards.

```
GRANT ALL PRIVILEGES ON DATABASE ASSIGNMENT TO ROLE ADMIN;  
GRANT ALL PRIVILEGES ON ALL SCHEMAS IN DATABASE ASSIGNMENT TO ROLE ADMIN;  
GRANT ALL PRIVILEGES ON ALL TABLES IN DATABASE ASSIGNMENT TO ROLE ADMIN;
```

```
GRANT USAGE ON SCHEMA ASSIGNMENT.PUBLIC TO ROLE ANALYST;  
GRANT SELECT ON ALL TABLES IN SCHEMA ASSIGNMENT.PUBLIC TO ROLE ANALYST;
```

```
GRANT USAGE ON SCHEMA ASSIGNMENT.public TO ROLE VIEWER;
```

- **Apply Network Policies:** Restrict access to trusted IPs.

```
CREATE NETWORK POLICY secure_nw
ALLOWED_IP_LIST = ('192.168.1.0/24', '203.0.113.0/32', '14.99.102.226')
BLOCKED_IP_LIST = ('10.0.0.0/8');
```

```
| ALTER ACCOUNT SET NETWORK_POLICY= SECURE_NW;
```

- **Enable MFA:** Enforce MFA for all users.

```
CREATE AUTHENTICATION POLICY enforce_mfa_policy
MFA_ENROLLMENT = REQUIRED
MFA_AUTHENTICATION_METHODS = ('PASSWORD');
```

```
ALTER ACCOUNT SET AUTHENTICATION POLICY PUBLIC.enforce_mfa_policy;
```

- **Data Masking:** Mask sensitive columns for non-admin roles.

```
CREATE MASKING POLICY sal_mask AS (salary FLOAT) RETURNS FLOAT ->
CASE
    WHEN CURRENT_ROLE() = 'ACCOUNTADMIN' THEN salary
    ELSE 000.000
END;
```

```
ALTER TABLE EMPLOYEES MODIFY COLUMN SALARY SET MASKING POLICY sal_mask;
```

So when I switch role to ANLAYST with giving it all the grants on the employee table, the salary column shows 0 as it is masked:

| # | SALARY |
|---|--------|
| | 0 |
| | 0 |