CSci-5708: LAB-4 (Solution)

Part A:

Check using

SELECT GRANTOR, GRANTEE, TABLE_NAME, TABLE_SCHEMA, HIERARCHY FROM ALL_TAB_PRIVS WHERE TABLE_NAME IN ('A_1', 'A_2', 'MOVIE30');

SELECT OWNER, VIEW_NAME FROM ALL_VIEWS WHERE OWNER='S18C5708G30'

SELECT OWNER, TABLE_NAME FROM ALL_TABLES WHERE OWNER='S18C5708G30'

SELECT TABLE_NAME, GRANTOR, GRANTEE, PRIVILEGE, GRANTABLE FROM ALL_TAB_PRIVS WHERE GRANTOR='<your-account>,'

1. SQL> CREATE VIEW A_1 AS
   SELECT *
   FROM MOVIE30
   WHERE YR=1955;
   SQL> GRANT SELECT ON A_1 TO S18C5708G26;

2. SQL> CREATE VIEW A_2 AS
   SELECT *
   FROM MOVIE30
   WHERE YR=1965;
   SQL> GRANT SELECT ON A_2 TO PUBLIC;

3. SQL> CREATE VIEW <View_name> AS SELECT id, title, yr, votes FROM <Table_name>;
   SQL> GRANT SELECT, DELETE, UPDATE ON <View_name> TO <Account_B>;

4. SQL> GRANT SELECT, INSERT ON <Table_name> TO <Account_B> WITH GRANT OPTION;
   SQL> GRANT SELECT, INSERT ON <Account_A.Table_name> TO <Account_C>;
   SQL> REVOKE SELECT, INSERT ON <Table_name> FROM <Account_B>;

No, Account C cannot insert data into movie table.

5. SQL> GRANT SELECT, INSERT ON <Table_name> TO <Account_B> WITH GRANT OPTION;
   SQL> GRANT SELECT, INSERT ON <Account_A.Table_name >TO <Account_C> WITH GRANT OPTION;
SQL> GRANT SELECT, INSERT ON Account_A.Table_name TO <Account_C>;

SQL> REVOKE SELECT, INSERT ON <Table_name> FROM <Account_B>;
Account_B will not be able to insert because of the cascaded effect of revoke statement.

6. Account_B does not retain insert(title) privileges.

7. Only Account_A has delete permissions.

8. Account_C still has select privileges.

9. Account_B cannot retrieve the view.

PART B:

4. INSERT INTO mycity SELECT id, area, perimeter, CITY_DESC(city_name, cntry_name, status, pop_rank, pop_class), location FROM city; COMMIT;

5. SELECT c.description.city_name FROM mycity c WHERE c.description.pop_rank < 3;

OUTPUT: Minneapolis, Milwaukee, Chicago

6. SELECT SDO_GEOM.SDO_DISTANCE(C1.location, C2.location, 0.5) FROM city C1, city C2 WHERE C1.CITY_NAME = 'Madison' AND C2.CITY_NAME = 'Minneapolis';

OUTPUT: 4.32680234

7. SELECT C1.CITY_NAME FROM city C1, city C2 WHERE C2.CITY_NAME = 'Chicago' AND SDO_GEOM.SDO_DISTANCE(C1.location, C2.location, 0.5) >= ALL(SELECT SDO_GEOM.SDO_DISTANCE(C1.location, C2.location, 0.5) FROM city C3, city C4 WHERE C3.CITY_NAME = 'Chicago');

OUTPUT: Bismarck

PART C:

5. Yes. polymorphism is supported. printAccountInfo() is overloaded in checkingaccount and savingsaccount classes.

PART D:

1. 3 clusters.
2. No. Because k-means doesn’t perform well when clusters have varying densities and sizes.
1. 2 clusters and 2 outliers.
2. K-means does partition the two clusters into distinct clusters. However, the outliers are also assigned to one of the clusters. This is a drawback of k-means.

1. Performance of k-means on dataset 3 is better than on dataset 4. Performance of k-means is better on globular clusters (both clusters in dataset 3 are globular) than on non-globular clusters (In dataset 4, one cluster is globular while the other is in the shape of a square).