Paneri Patel
Csc 134
Assignment 5

Query 1: Retrieve information about the projects (title, status and whether archived or not) that have an 'Optional' reviewer. (hint: Role is "optional")

SELECT p.Title,p.Project_Status,p.Archived FROM PROJECT as p JOIN REVIEWS as r ON p.Project_ID = r.Project_ID WHERE r.Reviewer_Role='OPTIONAL';

Query 2: Retrieve the information about the investigators (first name, last name and organization) who have done more than one project.

SELECT i.First_Name,i.Last_Name,i.Organization FROM INVESTIGATOR as i JOIN WORKS_ON as w ON i.ssn = w.ssn GROUP BY i.ssn HAVING count(*)>2;

Query: 3 Retrieve the information of reviewers (first name and last name), investigators (first name and last name) for the project "Air Quality".

SELECT re.First_name AS Reviewer_FirstName,re.Last_name As Reviewer_LastName,i.First_name AS Investigator_FirstName,i.Last_name AS Investigator_LastName FROM INVESTIGATOR as i JOIN WORKS_ON as w ON i.ssn = w.ssn JOIN PROJECT as p ON w.Project_ID = p.Project_ID JOIN REVIEWS as r ON p.Project_ID = r.Project_ID JOIN REVIEWER as re ON r.ssn = re.ssn WHERE p.Title = 'Air Quality';

Query 4: Retrieve information about each project and the Investigator of the project.   List project ID, title, and SSN and last name of the Investigator. Order the result in ascending order of Project ID.

SELECT p.Project_ID,p.Title,i.ssn,i.Last_Name FROM PROJECT as p JOIN WORKS_ON as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn = i.ssn ORDER BY p.Project_ID asc;

```
mysql>
mysql> SELECT p.Project_ID,p.Title,i.ssn,i.Last_Name FROM PROJECT as p JOIN WORKS_ON  as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn = i
.ssn ORDER BY p.Project_ID asc;
+------------+--------------------+-----------+-----------+
| Project_ID | Title              | ssn       | Last_Name |
+------------+--------------------+-----------+-----------+
| 1234       | MASK DETECTION     | 123456789 | PATEL     |
| 1234       | MASK DETECTION     | 346578932 | SMITH     |
| 1235       | MOBILE APPLICATION | 987654321 | PATEL     |
| 1236       | Air Quality        | 987654321 | PATEL     |
| 1237       | COVID-19 DETECTOR  | 123456789 | PATEL     |
| 1237       | COVID-19 DETECTOR  | 987654321 | PATEL     |
+------------+--------------------+-----------+-----------+
6 rows in set (0.00 sec)

mysql>
mysql>
```

Query 5: Retrieve information about each project and the Principle Investigator of the project. List project ID, title, and SSN and first name of the Principle Investigator. (hint: the role of the investigator is "PI".)

SELECT p.Project_ID,p.Title,i.ssn,i.First_Name FROM PROJECT as p JOIN WORKS_ON as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn = i.ssn WHERE Inv_Role='PI';

```
mysql>
mysql>
mysql> SELECT p.Project_ID,p.Title,i.ssn,i.First_Name FROM PROJECT as p JOIN WORKS_ON  as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn =
i.ssn WHERE Inv_Role='PI';
+------------+--------------------+-----------+------------+
| Project_ID | Title              | ssn       | First_Name |
+------------+--------------------+-----------+------------+
| 1234       | MASK DETECTION     | 346578932 | JOHN       |
| 1235       | MOBILE APPLICATION | 987654321 | PRIYANKA   |
| 1236       | Air Quality        | 987654321 | PRIYANKA   |
| 1237       | COVID-19 DETECTOR  | 987654321 | PRIYANKA   |
+------------+--------------------+-----------+------------+
4 rows in set (0.00 sec)

mysql>
mysql>
```

Query 6: Get the project information (project id, title, status and whether archived or not) which has a 'Co-PI'. (hint: the role of the investigator is "Co-PI").

SELECT p.Project_ID,p.Title,p.Project_Status ,p.Archived FROM PROJECT as p JOIN WORKS_ON as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn = i.ssn WHERE Inv_Role='Co-PI';

```
mysql>
mysql>
mysql> SELECT p.Project_ID,p.Title,p.Project_Status ,p.Archived FROM PROJECT as p JOIN WORKS_ON  as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i O
N w.ssn = i.ssn WHERE Inv_Role='Co-PI';
+------------+-------------------+----------------+----------+
| Project_ID | Title             | Project_Status | Archived |
+------------+-------------------+----------------+----------+
| 1234       | MASK DETECTION    | INCOMPLETE     | YES      |
| 1237       | COVID-19 DETECTOR | INCOMPLETE     | NO       |
+------------+-------------------+----------------+----------+
2 rows in set (0.00 sec)
```

Query 7: Retrieve all the projects (project id, title) in which "John Smith" serves as a principle investigator.

SELECT p.Project_ID,p.Title FROM PROJECT as p JOIN WORKS_ON as w ON p.Project_ID = w.Project_ID JOIN INVESTIGATOR as i ON w.ssn = i.ssn WHERE i.First_Name = 'John' and Last_Name = 'Smith' and Inv_Role='PI';

Query 8: Retrieve the reviewers who reviewed more than 2 projects. Please list reviewer's SSN and number of projects reviewed by the reviewer.

SELECT re.ssn,count(*) FROM REVIEWS as r JOIN REVIEWER as re ON re.ssn = r.ssn GROUP BY r.ssn HAVING count(*)>2;

Query 9: Retrieve the investigators who serve as "PI" for at least 2 projects.   Please list the SSN, last name, and number of projects served as "PI".

SELECT i.ssn,i.Last_Name,count(*) FROM INVESTIGATOR as i JOIN WORKS_ON as w ON i.ssn = w.ssn WHERE w.Inv_Role ='PI'GROUP BY i.ssn HAVING count(*)>2;

Query 10: Retrieved the SSN of all reviewers and all investigators who have "Smith" as the last name.

SELECT i.ssn AS Investigator_SSN,re.ssn AS Reviewer_SSN FROM INVESTIGATOR as i JOIN WORKS_ON as w ON i.ssn = w.ssn JOIN PROJECT as p ON w.Project_ID = p.Project_ID JOIN REVIEWS as r ON p.Project_ID = r.Project_ID JOIN REVIEWER as re ON r.ssn = re.ssn WHERE i.Last_Name = 'Smith' or re.Last_Name = 'Smith';

```
mysql>
mysql>
mysql> SELECT i.ssn AS Investigator_SSN,re.ssn AS Reviewer_SSN FROM INVESTIGATOR as i JOIN WORKS_ON  as w ON i.ssn = w.ssn JOIN  PROJECT as p ON w.Project_ID
 = p.Project_ID JOIN REVIEWS as r ON p.Project_ID = r.Project_ID JOIN REVIEWER as re ON r.ssn = re.ssn WHERE i.Last_Name = 'Smith' or re.Last_Name = 'Smith';
+------------------+--------------+
| Investigator_SSN | Reviewer_SSN |
+------------------+--------------+
|        346578932 |    256735421 |
|        987654321 |    866543019 |
+------------------+--------------+
2 rows in set (0.00 sec)

mysql>
```