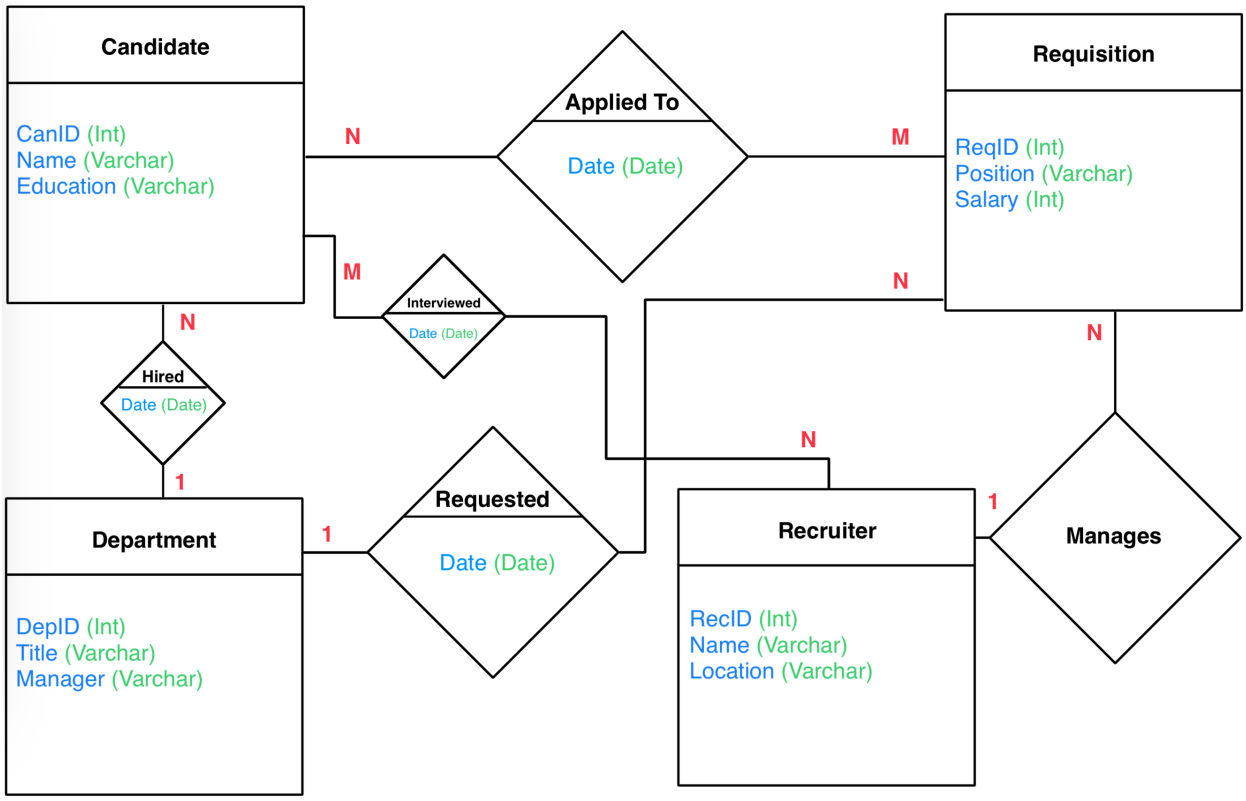
Assignment 5: Step 4 of Your PDA (Personal Database Application)



Candidates (**canID**, canName, education)
Requisitions (**reqID**, depID, recID, title, salary, opnDate, endDate)
Departments (**depID**, depName, manager)
Recruiters (**recID**, recName, location)
AppliedTo (**canID**, **reqID**, **appDate**)
Interviewed (**canID**, **recID, intDate**)

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| HR                 |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| TEST               |
+--------------------+
6 rows in set (0.01 sec)

mysql> use HR;
Database changed
```

```
mysql> show tables;
+--------------+
| Tables_in_hr |
+--------------+
| AppliedTo    |
| Candidates   |
| Departments  |
| Interviewed  |
| Recruiters   |
| Requisitions |
+--------------+
6 rows in set (0.00 sec)
```

1.1)
The following query identifies the name and education of candidates who applied to requisitions created by any department with the word Engineering in the department's name. The aim is to provide information on the quality of a candidate's fit in an engineering department based on their level of education while limiting the output to 20 entries or less.

```
mysql> SELECT
    -> C.canName as "Candidate Name",
    -> C.education as "Education"
    -> FROM Candidates C
    -> JOIN AppliedTo A ON C.canID = A.canID
    -> JOIN Requisitions Q ON A.reqID = Q.reqID
    -> JOIN Departments D ON Q.depID = D.depID
    -> WHERE D.depName LIKE '%Engineering%'
    -> LIMIT 20
    -> ;

+----------------+-----------+
| Candidate Name | Education |
+----------------+-----------+
| Kenneth        | HS/GED    |
| Jessica        | HS/GED    |
| Kimberly       | PhD       |
| Mark           | MBA/MS/MA |
| Kimberly       | MBA/MS/MA |
| Susan          | MBA/MS/MA |
| Linda          | BS/BA     |
| Sarah          | BS/BA     |
| Melissa        | BS/BA     |
| Carol          | PhD       |
| Jennifer       | BS/BA     |
| Nadine         | HS/GED    |
| Linda          | PhD       |
| Lisa           | BS/BA     |
| Matthew        | PhD       |
```

```
| Kimberly       | MBA/MS/MA |
| Susan          | MBA/MS/MA |
| Jessica        | MBA/MS/MA |
| Mary           | HS/GED    |
| Linda          | HS/GED    |
+----------------+-----------+
20 rows in set (0.01 sec)
```

1.2)
The following query counts the number of candidates with a Ph.D. education who have applied to departments with 'Engineering' in their name and groups the results by department name while limiting the output to 20 entries or less.

```
mysql> SELECT
    -> COUNT(C.canID) AS "Total Candidates",
    -> D.depName AS "Department Name"
    -> FROM Candidates C
    -> JOIN AppliedTo A ON C.canID = A.canID
    -> JOIN Requisitions Q ON A.reqID = Q.reqID
    -> JOIN Departments D ON Q.depID = D.depID
    -> WHERE D.depName LIKE '%Engineering%'
    -> AND C.education = 'PhD'
    -> GROUP BY D.depName
    -> ;

+------------------+-----------------+
| Total Candidates | Department Name |
+------------------+-----------------+
|              491 | Engineering     |
+------------------+-----------------+
1 row in set (0.03 sec)
```

1.3)
The following query returns the department names that have attracted more than three Ph.D. candidates and the total number of such candidates for each department to identify which departments most appeal to highly educated candidates.

```
mysql> SELECT
    -> COUNT(C.canID) AS "Ph.D. Candidates",
    -> D.depName AS "Department Name"
    -> FROM Candidates C
    -> JOIN AppliedTo A ON C.canID = A.canID
    -> JOIN Requisitions Q ON A.reqID = Q.reqID
    -> JOIN Departments D ON Q.depID = D.depID
    -> WHERE C.education = 'PhD'
    -> GROUP BY D.depName
    -> HAVING COUNT(C.canID) > 3
    -> ;
```

```
+-----------------+---------------------+
| Ph.D. Candidates | Department Name      |
+-----------------+---------------------+
|              584 | Customer Support     |
|              491 | Engineering          |
|              514 | Sales                |
|              488 | Operations           |
|              541 | Finance              |
|              426 | Human Resources      |
|              480 | Marketing            |
|              561 | IT                   |
|              565 | Research and Develop |
|              477 | Legal                |
+-----------------+---------------------+
10 rows in set (0.06 sec)
```

2.1)

```
mysql> SELECT canName FROM Candidates WHERE canID = 'c54321';
Empty set (0.01 sec)

mysql> INSERT INTO Candidates values ('c54321','Thales','PhD');
Query OK, 1 row affected (0.00 sec)

mysql> SELECT * FROM Candidates WHERE canID = 'c54321';
+--------+---------+-----------+
| canID  | canName | education |
+--------+---------+-----------+
| c54321 | Thales  | PhD       |
+--------+---------+-----------+
1 row in set (0.00 sec)
```

2.2)

```
mysql> SELECT * FROM Candidates WHERE canID = 'c43210';
Empty set (0.00 sec)

mysql> UPDATE Candidates SET canID = 'c43210' WHERE canID = 'c54321';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM Candidates WHERE canID = 'c54321';
Empty set (0.00 sec)

mysql> SELECT * FROM Candidates WHERE canID = ‘c43210';
+--------+---------+-----------+
| canID  | canName | education |
+--------+---------+-----------+
| c43210 | Thales  | PhD       |
+--------+---------+-----------+
1 row in set (0.00 sec)
```

2.3)

```
mysql> SELECT COUNT(education)
    -> FROM Candidates
    -> WHERE education = ‘PhD’;

+------------------+
| COUNT(education) |
+------------------+
|             4437 |
+------------------+
1 row in set (0.01 sec)

mysql> SELECT COUNT(education) FROM Candidates WHERE education =
‘Ph.D.’;

+------------------+
| COUNT(education) |
+------------------+
|                0 |
+------------------+
1 row in set (0.01 sec)

mysql> UPDATE Candidates
    -> SET education = 'Ph.D.'
    -> WHERE education = ‘PhD’;

Query OK, 4437 rows affected (0.11 sec)
Rows matched: 4437  Changed: 4437  Warnings: 0

mysql> SELECT COUNT(education) FROM Candidates WHERE education =
‘PhD’;

+------------------+
| COUNT(education) |
+------------------+
|                0 |
+------------------+
1 row in set (0.01 sec)

mysql> SELECT COUNT(education) FROM Candidates WHERE education =
‘Ph.D.';

+------------------+
| COUNT(education) |
+------------------+
|             4437 |
+------------------+
1 row in set (0.01 sec)
```

```
mysql> SELECT * FROM Candidates WHERE canID = ‘c43210';

+--------+---------+-----------+
| canID  | canName | education |
+--------+---------+-----------+
| c43210 | Thales  | Ph.D.     |
+--------+---------+-----------+
1 row in set (0.00 sec)

mysql>
```

END.