README

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CSE-5330-002

A1. Tool used for this project MySQL Workbench

A2. Create a database

```
CREATE DATABASE company;
```

Use the database

```
USE company;
```

Create the table Employee

```
CREATE TABLE Employee(
    Fname VARCHAR(50),
    Minit VARCHAR(5),
    Lname VARCHAR(50),
    Ssn INT(100),
    Bdate DATE,
    Address VARCHAR(200),
    Sex VARCHAR(5),
    Salary INT(200),
    Super_ssn INT(200),
    Dno INT(50),
    PRIMARY KEY(Ssn)
);

DESCRIBE Employee;
```

Create the table Department

```
CREATE TABLE department(
Dname VARCHAR(200),
Dnumber INT(200) PRIMARY KEY,
Mgr_ssn INT(200),
Mgr_start_date DATE,
```

```
UNIQUE (Dname),
FOREIGN KEY (Mgr_ssn) REFERENCES Employee(Ssn)
);

DESCRIBE department;
```

Create the table dept_locations

```
CREATE TABLE dept_locations (
Dnumber INT(200),
Dlocation VARCHAR(200),
PRIMARY KEY(Dnumber, Dlocation),
FOREIGN KEY(Dnumber) REFERENCES department(Dnumber) ON DELETE CASCADE
);

DESCRIBE dept_locations;
```

Create the table project

```
CREATE TABLE project(
Pname VARCHAR(200),
Pnumber INT(200) PRIMARY KEY,
Plocation VARCHAR(200),
Dnum INT(200),
UNIQUE (Pname),
FOREIGN KEY (Dnum) REFERENCES Department (Dnumber)
);
```

Create the table works on

```
CREATE TABLE works_on (
Essn INT(200),
Pno INT(200),
Hours DECIMAL(4,2),
PRIMARY KEY(Essn, Pno),
FOREIGN KEY(Essn) REFERENCES Employee(Ssn) ON DELETE CASCADE,
FOREIGN KEY(Pno) REFERENCES project(Pnumber) ON DELETE CASCADE
);
```

A3. Inserting data into employee table

```
INSERT INTO employee VALUES ('James', 'U', 'Miller', 906218888, '1978-05-27', '13 Fifth St,Seattle,WA', 'M', 75000, 999999999, 5);
```

Inserting data into department table

```
INSERT INTO department VALUES ('QA', 11, 913323708, '2010-02-02');
```

Inserting data into dept_locations table

```
INSERT INTO dept_locations VALUES (11, 'Austin');
```

Inserting data into project table

```
INSERT INTO project VALUES ('DataMining', 13, 'Sacramento',6);
```

Inserting data into works_on table

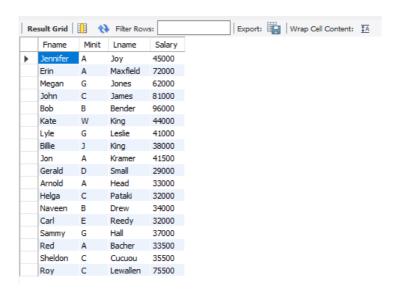
```
INSERT INTO works_on VALUES ('122344668', 30, 25.0);
```

A4. Select statement for each query executed

```
-- Anser 4: Method 1
SET @dno = (select Dnumber as DNO from Department where Dname = 'Sales');
Select Fname, Minit, Lname, Salary from Employee where Dno = @dno;

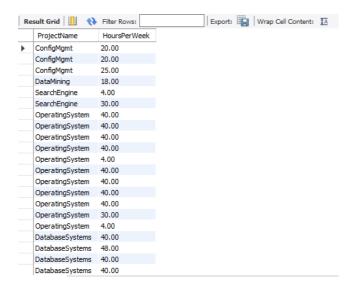
-- Anser 4: Method 2
Select Fname, Minit, Lname, Salary from Employee where Dno = (select Dnumber as DNO from Department where Dname = 'Sales');

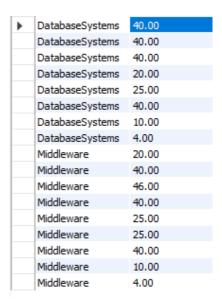
-- Answer 4: Method 3
Select Fname, Minit, Lname, Salary from Employee LEFT JOIN Department ON Employee.Dno = Department.Dnumber where Department.Dname = 'Sales';
```



-- Answer 5 : Method 1

Select Pname as ProjectName, Hours as HoursPerWeek from Project JOIN works_on ON Project.Pnumber = works_on.Pno where Project.Dnum = (Select Dno from Employee where Fname = 'Alex' and Lname = 'Yu');





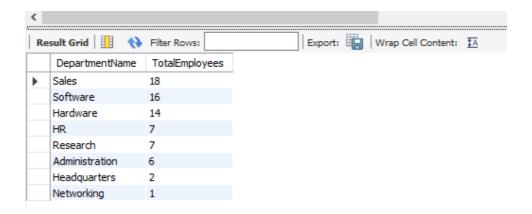
-- Answer 6:

Select sum(Salary) as TotalSalary from Employee LEFT JOIN Department ON Employee.Dno = Department.Dnumber where Department.Dname = 'Sales';



-- Answer 7:

Select Dname as DepartmentName, COUNT(*) as TotalEmployees from Department INNER JOIN Employee ON Employee.Dno = Department.Dnumber GROUP BY Department.Dnumber, Department.Dname ORDER BY TotalEmployees DESC;



-- Answer 8:

Select b.Fname, b.Lname, Count(*) as EmployeesSupervised from Employee as a, Employee as b where a.Super_ssn = b.Ssn GROUP BY b.Fname, b.Lname ORDER BY EmployeesSupervised DESC;

