-- Create the Departments table

```
CREATE TABLE Departments (
    Code INTEGER PRIMARY KEY,
    Name TEXT NOT NULL,
    Budget REAL
);
```

-- Create the Employees table

```
CREATE TABLE Employees (
    SSN INTEGER PRIMARY KEY,
    Name TEXT NOT NULL,
    LastName TEXT NOT NULL,
    Department INTEGER,
    FOREIGN KEY (Department) REFERENCES Departments(Code)
);
```

-- Insert sample data into Departments table

```
INSERT INTO Departments (Code, Name, Budget) VALUES
(10, 'Human Resources', 50000),
(14, 'IT', 75000),
(37, 'Marketing', 60000),
(77, 'Research', 90000),
(21, 'Finance', 45000);
```

-- Insert sample data into Employees table

```
INSERT INTO Employees (SSN, Name, LastName, Department) VALUES
(123456789, 'John', 'Doe', 10),
(987654321, 'Jane', 'Smith', 14),
(456789123, 'Emily', 'Johnson', 37),
(321654987, 'Michael', 'Williams', 77),
(159753258, 'Jessica', 'Brown', 21),
(852963741, 'Chris', 'Davis', 10),
(741258963, 'Patricia', 'Wilson', 77),
(369258147, 'David', 'Moore', 14),
(147852369, 'Linda', 'Taylor', 37);
```

2.1

```
SELECT LastName FROM Employees;
```

2.2

```
SELECT DISTINCT LastName FROM Employees;
```

2.3
```
SELECT * FROM Employees WHERE LastName = 'Smith';
```

2.4
```
SELECT * FROM Employees WHERE LastName IN ('Smith', 'Doe');
```

2.5
```
SELECT * FROM Employees WHERE Department = 14;
```

2.6
```
SELECT * FROM Employees WHERE Department IN (37, 77);
```

2.7
```
SELECT * FROM Employees WHERE LastName LIKE 'S%';
```

2.8
```
SELECT SUM(Budget) AS TotalBudget FROM Departments;
```

2.9
```
SELECT Department, COUNT(*) AS NumberOfEmployees
FROM Employees
GROUP BY Department;
```

2.10
```
SELECT Employees.*, Departments.*
FROM Employees
JOIN Departments ON Employees.Department = Departments.Code;
```

2.11
```
SELECT Employees.Name, Employees.LastName, Departments.Name AS
DepartmentName, Departments.Budget
FROM Employees
JOIN Departments ON Employees.Department = Departments.Code;
```

2.12
```
SELECT Employees.Name, Employees.LastName
FROM Employees
JOIN Departments ON Employees.Department = Departments.Code
WHERE Departments.Budget > 60000;
```

2.13
```
SELECT * FROM Departments
WHERE Budget > (SELECT AVG(Budget) FROM Departments);
```

2.14

```
SELECT Departments.Name
FROM Departments
JOIN Employees ON Departments.Code = Employees.Department
GROUP BY Departments.Code, Departments.Name
HAVING COUNT(Employees.SSN) > 2;
```

2.15

```
SELECT Employees.Name, Employees.LastName
FROM Employees
JOIN Departments ON Employees.Department = Departments.Code
WHERE Departments.Budget = (
   SELECT DISTINCT Budget
   FROM Departments
   ORDER BY Budget ASC
   LIMIT 1 OFFSET 1
);
```

2.16

```
INSERT INTO Departments (Code, Name, Budget) VALUES (11, 'Quality Assurance',
40000);

INSERT INTO Employees (SSN, Name, LastName, Department) VALUES (847219811,
'Mary', 'Moore', 11);
```

2.17

```
UPDATE Departments SET Budget = Budget * 0.9;
```

2.18

```
UPDATE Employees SET Department = 14 WHERE Department = 77;
```

2.19

```
DELETE FROM Employees WHERE Department = 14;
```

2.20

```
DELETE FROM Employees
WHERE Department IN (
   SELECT Code FROM Departments WHERE Budget >= 60000
);
```

2.21

```
DELETE FROM Employees;
```