

Project_3

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Creating Table

```
CREATE TABLE Employee(  
SSN char(9) UNIQUE NOT NULL,  
DOB datetime,  
Fname varchar(80),  
Minit varchar(80),  
Lname varchar(80),  
address varchar(200),  
PRIMARY KEY (SSN)  
);  
  
CREATE TABLE SalariedEmp  
(  
SSN1 char(9) UNIQUE NOT NULL,  
monthly_pay numeric(8, 2),  
Primary key (SSN1),  
Foreign Key (SSN1) REFERENCES Employee(SSN)  
);  
  
CREATE TABLE HourlyEmp  
(  
SSN2 char(9) UNIQUE NOT NULL,  
hourPay numeric(5, 2) CONSTRAINT CHK_hourPay CHECK (hourPay > 7.5),  
Primary key (SSN2),  
Foreign Key (SSN2) REFERENCES Employee(SSN)  
);
```

Creating Table

```
CREATE TABLE Project
(
  ProjName varchar(80) UNIQUE NOT NULL,
  ProjNum char(4) UNIQUE NOT NULL,
  ProjDesc varchar(100)
  PRIMARY KEY (ProjName, ProjNum)
);

CREATE TABLE Works_On(
  SSN char(9) NOT NULL,
  ProjName varchar(80) NOT NULL,
  ProjNum char(4) NOT NULL,
  deptNum char(3) NOT NULL,
  Primary Key (SSN, ProjName, ProjNum, deptNum),
  Foreign Key (SSN) REFERENCES Employee,
  Foreign Key (ProjName, ProjNum) REFERENCES Project,
  Foreign Key (deptNum) REFERENCES Department
);
```

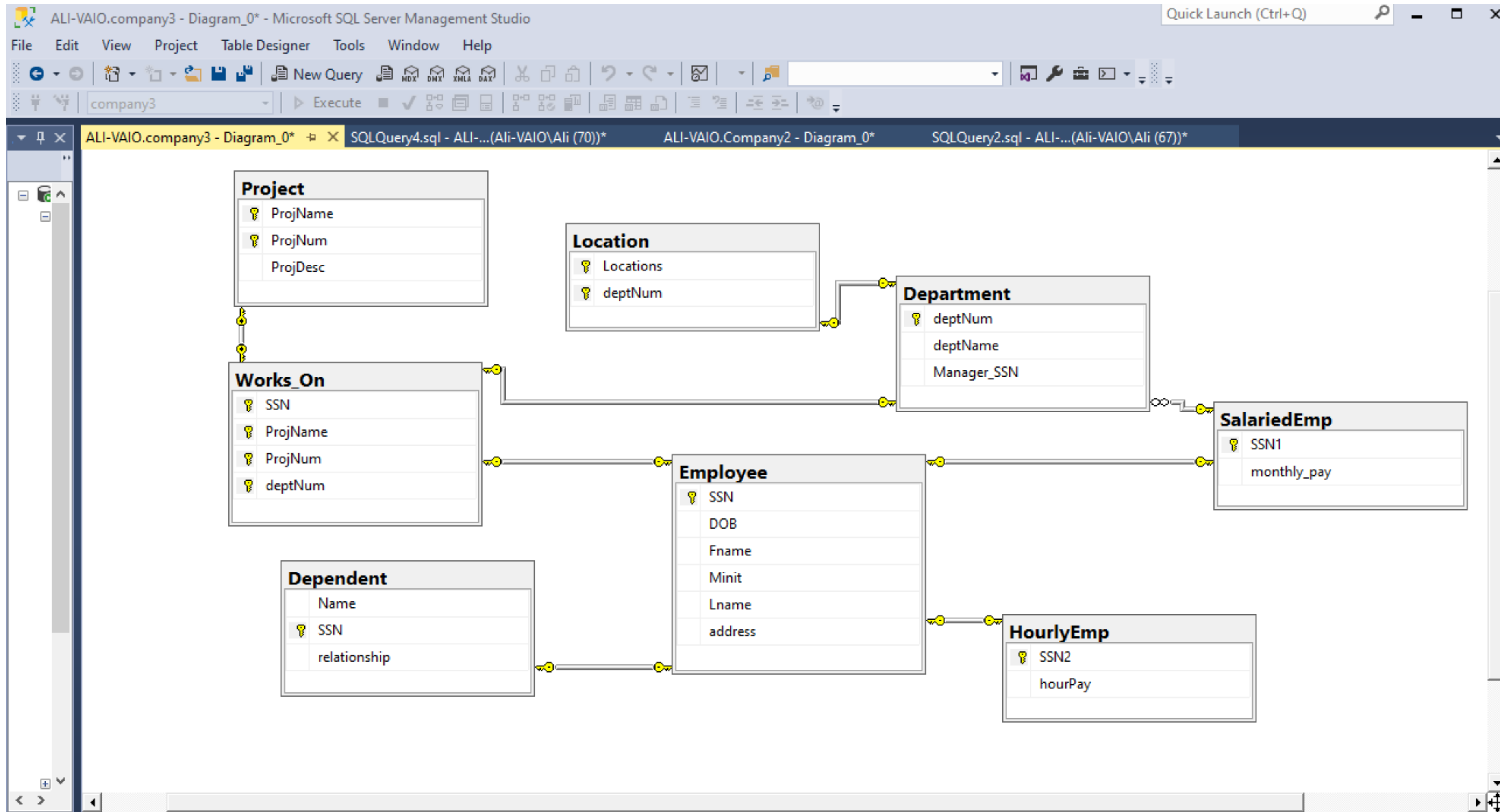

Creating Table

```
CREATE TABLE Dependent
(
  Name varchar(80) NOT NULL,
  SSN char(9) UNIQUE NOT NULL,
  relationship varchar(80) NOT NULL,
  Primary key (SSN),
  Foreign Key (SSN) REFERENCES Employee(SSN)
);

CREATE TABLE Department
(
  deptNum char(3) UNIQUE NOT NULL,
  deptName varchar(80),
  Manager_SSN char(9),
  PRIMARY KEY (deptNum),
  Foreign Key (Manager_SSN) REFERENCES SalariedEmp(SSN1)
);

CREATE TABLE Location
(
  Locations varchar(80) NOT NULL,
  deptNum char(3) NOT NULL,
  PRIMARY KEY (Locations, deptNum),
  Foreign Key (deptNum) REFERENCES Department(deptNum)
);
```

Relational Schema



Inserting

SQLQuery5.sql - ALI-...(Ali-VAIO\Ali (58)) ALI-VAIO.company3 - Diagram_0* SQLQuery4.sql - ALI-...(Ali-VAIO\Ali (70))*

```
INSERT INTO Employee Values ('111286793',1990/01/12, 'Ali', null, 'Rajabi', '180 L Street')
INSERT INTO Employee Values ('111286794',1986/11/25, 'Sima', null, 'Pirouzi', '103 A Street')
INSERT INTO Employee Values ('111286795',1991/06/18, 'Sama', null, 'Iraj', '45 Good Street')
INSERT INTO Employee Values ('111286796',1989/07/21, 'Mona', null, 'Sari', '307 K Street')
INSERT INTO Employee Values ('111286797',1983/08/12, 'Shayan', null, 'Sohrabi', '119 Lake Street')
INSERT INTO Employee Values ('111286798',1990/06/23, 'Iman', null, 'Ilkhani', '580 wood Street')
INSERT INTO Employee Values ('111286799',1994/10/22, 'Omid', null, 'Sheykhi', '186 L Street')
INSERT INTO Employee Values ('111286811',1993/11/24, 'Anita', null, 'Hamedi', '173 Gate Street')
INSERT INTO Employee Values ('111286812',1990/09/22, 'Amir', null, 'Farhadi', '109 O Street')

SELECT * FROM Employee
```

100 %

Results Messages

	SSN	DOB	Fname	Minit	Lname	address
1	111286793	1900-06-15 00:00:00.000	Ali	NULL	Rajabi	180 L Street
2	111286794	1900-01-08 00:00:00.000	Sima	NULL	Pirouzi	103 A Street
3	111286795	1900-01-19 00:00:00.000	Sama	NULL	Iraj	45 Good Street
4	111286796	1900-01-14 00:00:00.000	Mona	NULL	Sari	307 K Street
5	111286797	1900-01-21 00:00:00.000	Shay...	NULL	Sohr...	119 Lake Str...
6	111286798	1900-01-15 00:00:00.000	Iman	NULL	Ilkhani	580 wood Str...
7	111286799	1900-01-10 00:00:00.000	Omid	NULL	Shey...	186 L Street
8	111286811	1900-01-08 00:00:00.000	Anita	NULL	Ham...	173 Gate Str...
9	111286812	1900-01-11 00:00:00.000	Amir	NULL	Farh...	109 O Street

Inserting

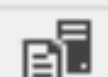
```
INSERT INTO SalariedEmp Values ('111286793', 5700.00)
INSERT INTO SalariedEmp Values ('111286794', 7700.00)
INSERT INTO SalariedEmp Values ('111286795', 6800.00)
INSERT INTO SalariedEmp Values ('111286796', 9700.00)
```

```
SELECT * FROM SalariedEmp
```

100 %



Results



Messages

	SSN1	monthly_pay
1	111286793	5700.00
2	111286794	7700.00
3	111286795	6800.00
4	111286796	9700.00

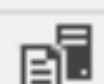
Inserting

```
INSERT INTO HourlyEmp VALUES ( '111286797', 25.00 )  
INSERT INTO HourlyEmp VALUES ( '111286798', 30.00 )  
INSERT INTO HourlyEmp VALUES ( '111286799', 27.00 )  
INSERT INTO HourlyEmp VALUES ( '111286811', 32.00 )  
INSERT INTO HourlyEmp VALUES ( '111286812', 28.00 )  
  
SELECT * FROM HourlyEmp
```

100 %



Results



Messages

	SSN2	hourPay
1	111286797	25.00
2	111286798	30.00
3	111286799	27.00
4	111286811	32.00
5	111286812	28.00

Inserting

```
INSERT INTO Dependent Values('Shima','111286797','wife')
INSERT INTO Dependent Values('Mahan','111286798','Son')
INSERT INTO Dependent Values('Sara','111286793','daughter')
INSERT INTO Dependent Values('Foad','111286811','husband')
```

```
SELECT * FROM Dependent
```

100 %

Results Messages

	Name	SSN	relationship
1	Sara	111286793	daughter
2	Shima	111286797	wife
3	Mah...	111286798	Son
4	Foad	111286811	husband

Inserting

```
INSERT INTO Project Values('Java', '1763', 'Developing New Soft Ware')
INSERT INTO Project Values('LBridge', '3678', 'Repairing Bridge')
INSERT INTO Project Values('Watersupply', '1372', 'Solving Problem')
INSERT INTO Project Values('WindTurbin', '3254', 'Solving Problem')
SELECT * FROM Project
```

100 %

Results

Messages

	ProjName	ProjNum	ProjDesc
1	Java	1763	Developing New Soft Ware
2	LBridge	3678	Repairing Bridge
3	Watersupply	1372	Solving Problem
4	WindTurbin	3254	Solving Problem

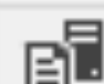
Inserting

```
INSERT INTO Department Values('210', 'Computer Sci', '111286793')
INSERT INTO Department Values('406', 'Electrical Eng', '111286794')
INSERT INTO Department Values('407', 'Civil Eng', '111286795')
INSERT INTO Department Values('306', 'Physic', '111286796')
SELECT * FROM Department
```

100 %



Results



Messages

	deptNum	deptName	Manager_SSN
1	210	Computer Sci	111286793
2	306	Physic	111286796
3	406	Electrical Eng	111286794
4	407	Civil Eng	111286795

Inserting

```
INSERT INTO Location Values('Shin Street', '210')
INSERT INTO Location Values('Mall Street', '210')
INSERT INTO Location Values('Golden Street', '406')
INSERT INTO Location Values('Sali Street', '407')
INSERT INTO Location Values('End Street', '306')
SELECT * FROM Location
```

100 %



Results



Messages

	Locations	deptNum
1	End Street	306
2	Golden Street	406
3	Mall Street	210
4	Sali Street	407
5	Shin Street	210

Inserting

```
INSERT INTO Works_On Values('111286793', 'Java', '1763', '210')
INSERT INTO Works_On Values('111286794', 'WindTurbin', '3254', '406')
INSERT INTO Works_On Values('111286795', 'LBridge', '3678', '407')
INSERT INTO Works_On Values('111286796', 'WaterSupply', '1372', '306')
INSERT INTO Works_On Values('111286797', 'WaterSupply', '1372', '407')
INSERT INTO Works_On Values('111286798', 'Java', '1763', '210')
INSERT INTO Works_On Values('111286799', 'LBridge', '3678', '407')
INSERT INTO Works_On Values('111286812', 'Java', '1763', '210')
INSERT INTO Works_On Values('111286811', 'WindTurbin', '3254', '406')
INSERT INTO Works_On Values('111286795', 'WaterSupply', '1372', '407')
```

100 %

Results Messages

	SSN	ProjName	ProjNum	deptNum
1	111286793	Java	1763	210
2	111286794	WindTurbin	3254	406
3	111286795	LBridge	3678	407
4	111286795	WaterSupply	1372	407
5	111286796	WaterSupply	1372	306
6	111286797	WaterSupply	1372	407
7	111286798	Java	1763	210
8	111286799	LBridge	3678	407
9	111286811	WindTurbin	3254	406
10	111286812	Java	1763	210

UPDATE

```
UPDATE Employee  
SET Fname = 'Alireza'  
WHERE SSN = '111286793';
```

```
SELECT * FROM Employee
```

100 %

Results Messages

	SSN	DOB	Fname	Minit	Lname	address
1	111286793	1900-06-15 00:00:00.000	Alireza	NULL	Rajabi	180 L Street
2	111286794	1900-01-08 00:00:00.000	Sima	NULL	Pirouzi	103 A Street
3	111286795	1900-01-19 00:00:00.000	Sama	NULL	Iraj	45 Good Street
4	111286796	1900-01-14 00:00:00.000	Mona	NULL	Sari	307 K Street
5	111286797	1900-01-21 00:00:00.000	Shayan	NULL	Sohrabi	119 Lake Street
6	111286798	1900-01-15 00:00:00.000	Iman	NULL	Ilkhani	580 wood Street
7	111286799	1900-01-10 00:00:00.000	Omid	NULL	Shey...	186 L Street
8	111286811	1900-01-08 00:00:00.000	Anita	NULL	Hamedi	173 Gate Street
9	111286812	1900-01-11 00:00:00.000	Amir	NULL	Farhadi	109 O Street

UPDATE

```
UPDATE SalariedEmp  
SET monthly_pay = 10000.00  
WHERE SSN1 IN(  
SELECT SSN FROM Employee  
WHERE Fname = 'Sima');  
  
SELECT * FROM SalariedEmp
```

100 %

Results Messages

	SSN1	monthly_pay
1	111286793	5700.00
2	111286794	10000.00
3	111286795	6800.00
4	111286796	9700.00

UPDATE

```
INSERT INTO HourlyEmp VALUES ( '111286797', 27.00 )
INSERT INTO HourlyEmp VALUES ( '111286798', 30.00 )
INSERT INTO HourlyEmp VALUES ( '111286799', 27.00 )
INSERT INTO HourlyEmp VALUES ( '111286811', 32.00 )
INSERT INTO HourlyEmp VALUES ( '111286812', 28.00 )

SELECT * FROM HourlyEmp

INSERT INTO Dependent Values('Shima', '111286797', 'wife')
INSERT INTO Dependent Values('Mahan', '111286798', 'Son')
INSERT INTO Dependent Values('Sara', '111286793', 'daughter')
INSERT INTO Dependent Values('Foad', '111286811', 'husband')

SELECT * FROM Dependent
```

100 %

Results Messages

	SSN2	hourPay
1	111286797	29.00
2	111286798	32.00
3	111286799	29.00
4	111286811	32.00
5	111286812	30.00

```
UPDATE HourlyEmp
SET hourPay = hourPay + 2
WHERE HourlyEmp.hourPay <= 30;

SELECT * FROM HourlyEmp
```

100 %

Results Messages

	SSN2	hourPay
1	111286797	29.00
2	111286798	32.00
3	111286799	29.00
4	111286811	32.00
5	111286812	30.00

Join

```
SELECT Employee.SSN, Employee.Fname, Employee.Lname, Name, relationship
FROM Employee
INNER JOIN Dependent w ON w.SSN = Employee.SSN;
```

	SSN	Fname	Lname	Name	relationship
1	111286793	Alireza	Rajabi	Sara	daughter
2	111286797	Shayan	Sohrabi	Shima	wife
3	111286798	Iman	Ilkhani	Mahan	Son
4	111286811	Anita	Hamedi	Foad	husband

```
SELECT Employee.SSN, Employee.Fname, deptNum
FROM Employee
INNER JOIN Works_On w ON w.SSN = Employee.SSN;
```

	SSN	Fname	deptNum
1	111286793	Alireza	210
2	111286794	Sima	406
3	111286795	Sama	407
4	111286795	Sama	407
5	111286796	Mona	306
6	111286797	Shayan	407
7	111286798	Iman	210
8	111286799	Omid	407
9	111286811	Anita	406
10	111286812	Amir	210

Subquery

```
= SELECT Fname, Lname, SSN  
FROM Employee  
WHERE SSN IN (SELECT Manager_SSN FROM Department);
```

100 %



Results



Messages

	Fname	Lname	SSN
1	Aireza	Rajabi	111286793
2	Sima	Pirouzi	111286794
3	Sama	Iraj	111286795
4	Mona	Sari	111286796

Union

```
SELECT address  
FROM Employee  
UNION  
SELECT Locations  
FROM Location;
```

100 %

Results Messages

	address
1	103 A Street
2	109 O Street
3	119 Lake Street
4	173 Gate Street
5	180 L Street
6	186 L Street
7	307 K Street
8	45 Good Street
9	580 wood Street
10	End Street
11	Golden Street
12	Mall Street
13	Sali Street
14	Shin Street

Group By

```
SELECT deptNum, COUNT(SSN)  
FROM Works_On  
GROUP BY deptNum;
```

100 %



Results



Messages

	deptNum	(No column name)
1	210	3
2	306	1
3	406	2
4	407	4

Group By And Having

```
SELECT ProjName, COUNT(SSN)
FROM Works_On
GROUP BY ProjName
HAVING ProjName = 'Java';
```

100 %

Results Messages

	ProjName	(No column name)
1	Java	3