

### 1) Creating EMPLOYEE table

```
mysql> CREATE TABLE employee(FName VARCHAR(20) NOT NULL, Minit CHAR, LName VARCHAR(20) NOT NULL, Ssn  
2), Super_ssn CHAR(9), Dno INT NOT NULL);  
mysql> DESC employee;
```

Field	Type	Null	Key	Default	Extra
FName	varchar(20)	NO		NULL	
Minit	char(1)	YES		NULL	
LName	varchar(20)	NO		NULL	
Ssn	char(9)	NO		NULL	
Bdate	date	YES		NULL	
Address	varchar(50)	YES		NULL	
Sex	char(1)	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
Super_ssn	char(9)	YES		NULL	
Dno	int	NO		NULL	

10 rows in set (0.00 sec)

### 2) Creating DEPARTMENT table

```
mysql> CREATE TABLE department(Dname VARCHAR(15) NOT NULL UNIQUE, Dnumber INT NOT NULL PRIMARY KEY  
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> DESC department;
```

Field	Type	Null	Key	Default	Extra
Dname	varchar(15)	NO	UNI	NULL	
Dnumber	int	NO	PRI	NULL	
Mgr_ssn	char(9)	NO		NULL	

3 rows in set (0.01 sec)

### 3) Insert into EMPLOYEE table

```
mysql> INSERT INTO employee VALUES('Lando', 'S', 'Norris', '349876540', '1999-11-13', 'Silverstone, England', 'M', 650  
Query OK, 1 row affected (0.08 sec)
```

```
sql> SELECT * FROM employee;
```

FName	Minit	LName	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
Lewis	G	Hamilton	237593218	1985-01-07	Silverstone, England	M	400000.00	453934859	1
Max	J	Verstappen	456349576	1987-09-30	Zandvoort, Netherlands	M	700000.00	453712959	1
Fernando	J	Alonso	920127846	1981-07-29	Catalunya, Spain	M	350000.00	908234284	2
Carlos	J	Sainz	445986726	1994-09-01	Catalunya, Spain	M	500000.00	928357324	3
Charles	M	Leclerc	765435399	1997-10-16	Monaco	M	450000.00	349587738	1
Lando	S	Norris	349876540	1999-11-13	Silverstone, England	M	650000.00	549837928	1

6 rows in set (0.00 sec)

#### 4) Adding column in department table (ALTER command)

```
mysql> ALTER TABLE department ADD Mgr_start_date DATE NOT NULL;
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> DESC department;
```

Field	Type	Null	Key	Default	Extra
Dname	varchar(15)	NO	UNI	NULL	
Dnumber	int	NO	PRI	NULL	
Mgr_ssn	char(9)	NO		NULL	
Mgr_start_date	date	NO		NULL	

4 rows in set (0.00 sec)

#### 5) Insert into Department table

```
mysql> INSERT INTO department VALUES('Aero', 1, '103584383', '1980-05-07'), ('Chassis', 2, '213044985', '1979-09-16');
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM department;
```

Dname	Dnumber	Mgr_ssn	Mgr_start_date
Aero	1	103584383	1980-05-07
Chassis	2	213044985	1979-09-16
Analytics	3	234958795	1988-03-03

3 rows in set (0.00 sec)

#### 6) Modifying a value(UPDATE command)

```
mysql> UPDATE employee SET Dno=2 WHERE Minit = 'S';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> SELECT * FROM employee;
```

FName	Minit	LName	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
Lewis	G	Hamilton	237593218	1985-01-07	Silverstone, England	M	400000.00	453934859	1
Max	J	Verstappen	456349576	1987-09-30	Zandvoort, Netherlands	M	700000.00	453712959	1
Fernando	J	Alonso	920127846	1981-07-29	Catalunya, Spain	M	350000.00	908234284	2
Carlos	J	Sainz	445986726	1994-09-01	Catalunya, Spain	M	500000.00	928357324	3
Charles	M	Leclerc	765435399	1997-10-16	Monaco	M	450000.00	349587738	1
Lando	S	Norris	349876540	1999-11-13	Silverstone, England	M	650000.00	549837928	2

#### 7) Adding a check constraint (ALTER command)

```
mysql> ALTER TABLE employee ADD CONSTRAINT dept_check CHECK (Dno IN (1, 2, 3));
Query OK, 6 rows affected (0.10 sec)
Records: 6 Duplicates: 0 Warnings: 0
```

#### 8) Using aggregate functions(AVG, HAVING clauses)

```
mysql> SELECT AVG(Salary), Address FROM employee GROUP BY Address;
```

AVG(Salary)	Address
525000.000000	Silverstone, England
700000.000000	Zandvoort, Netherlands
425000.000000	Catalunya, Spain
450000.000000	Monaco

4 rows in set (0.00 sec)

#### 9) Finding number of employees in each department

```
mysql> SELECT count(*), department.Dname FROM employee, department WHERE employee.Dno = department.Dno;
```

count(*)	Dname
2	Aero
2	Analytics
2	Chassis