Experiment- 5,6

Title: Use of Inbuilt functions and relational algebra operation

Objective: To understand the use of inbuilt function and relational algebra with sql query.

1. Consider the following table structure and attempt.

Supplier-(scode,sname,scity,turnover)

Part-(pcode,weigh,color,cost,sellingprice)

Supplier_Part-(scode,pcode,qty)

a) Create tables

```
2  create table Supplier(
3  scode varchar(10) primary key,
4  sname varchar(40) not null,
5  scity varchar(10) not null,
6  turnover int
7  );
8  desc Supplier;
```

Result Grid | Filter Rows: | Export:

Field	Type	Null	Key	Default	Extra
scode	varchar(10)	NO	PRI	NULL	
sname	varchar(40)	NO		NULL	
scity	varchar(10)	NO		NULL	
turnover	int	YES		NULL	

```
16 create table Part(
17 pcode varchar(10) primary key,
18 weigh int,
19 color varchar(10),
20 cost int,
21 sellingprice int
22 );
23 desc Part;
```

Result Grid | Filter Rows: | Export: | Wrap

Field	Type	Null	Key	Default	Extra
pcode	varchar(10)	NO	PRI	NULL	
weigh	int	YES		NULL	
color	varchar(10)	YES		NULL	
cost	int	YES		NULL	
sellingprice	int	YES		NULL	

```
31 create table Supplier_Part(
32 scode varchar(10),
33 pcode varchar(10),
34 qty int,
35 primary key (scode,pcode)
36 );
37 desc Supplier_Part;
```

Result Grid | Filter Rows: | Export:

Field	Type	Null	Key	Default	Extra
scode	varchar(10)	NO	PRI	NULL	
pcode	varchar(10)	NO	PRI	NULL	
qty	int	YES		NULL	

b) Populate the table.

```
insert into Supplier values("S001" , "Ram" , "Mumbai" , 30);
insert into Supplier values("S002" , "Shyam" , "Surat" , 50);
insert into Supplier values("S003" , "Hari" , "Baroda" , 300);
insert into Supplier values("S004" , "Raj" , "Pune" , 150);
select * from Supplier
```

Result Grid | Filter Rows: | Edit: | Export/Import:

scode	sname	scity	turnover
S001	Ram	Mumbai	30
S002	Shyam	Surat	50
S003	Hari	Baroda	300
S004	Raj	Pune	150
NULL	NULL	NULL	NULL

```
insert into Part values("P001" , 20 , "Blue" , 400 , 500);
insert into Part values("P002" , 30 , "Green" , 500 , 550);
insert into Part values("P003" , 25 , "White" , 250 , 300);
insert into Part values("P004" , 50 , "Black" , 150 , 300);
select * from Part;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

pcode	weigh	color	cost	sellingprice
P001	20	Blue	400	500
P002	30	Green	500	550
P003	25	White	250	300
P004	50	Black	150	300
NULL	NULL	NULL	NULL	NULL

```
insert into Supplier_Part values("S001" , "P001" , 5);
insert into Supplier_Part values("S002" , "P002" , 3);
insert into Supplier_Part values("S003" , "P003" , 2);
insert into Supplier_Part values("S004" , "P004" , 6);
select * from Supplier_Part
```

Result Grid | Filter Rows: | Edit: | Export/Impc

scode	pcode	qty
S001	P001	5
S002	P002	3
S003	P003	2
S004	P004	6
NULL	NULL	NULL

2. Write appropriate SQL Statement for the following:

1. Get the supplier number and part number in ascending order of supplier number.

```
select scode,pcode from Supplier_Part order by scode asc;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

scode	pcode
S001	P001
S002	P002
S003	P003
S004	P004
NULL	NULL

2. Get the details of supplier who operate from Mumbai with turnover 30.

```
47 •  select * from Supplier where scity="Mumbai" and turnover=30;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

scode	sname	scity	turnover
S001	Ram	Mumbai	30
NULL	NULL	NULL	NULL

3. Get the total number of supplier.

```
49 •  select count(*) as total_suppliers from Supplier;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Con

total_suppliers
4

4. Get the part number weighing between 25 and 35.

```
51 •  select pcode,weigh from Part where weigh between 25 and 35;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

pcode	weigh
P002	30
P003	25
NULL	NULL

5. Get the supplier number whose turnover is null.

```
53 •  select * from Supplier where turnover is null;
```

Result Grid | Filter Rows: | Edit: | Export/

scode	sname	scity	turnover
NULL	NULL	NULL	NULL

6. Get the part number that cost 20, 30 or 40 rupees.

```
55 •  select pcode,weigh from Part where weigh in(20,30,40);
```

Result Grid | Filter Rows: | Edit: | Export/Imp

pcode	weigh
P001	20
P002	30
NULL	NULL

7. Get the total quantity of part 2 that is supplied.

```
57 •  select sum(qty) as total_quantity from Supplier_Part where pcode="P002";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_quantity
3

8. Get the name of supplier who supply part 2.

```
59 •  select s.sname from Supplier s join Supplier_Part sp on s.scode = sp.scode
60    where sp.scode = "S002";
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

sname
Shyam

9. Get the part number whose cost is greater than the average cost.

```
62 •  select pcode from Part where cost > (select avg(cost) from Part);
```

Result Grid | Filter Rows: | Edit: | Export/Import:

pcode
P001
P002
NULL

10. Get the supplier number and turnover in descending order of turnover.

```
64 •  select scode,turnover from Supplier order by turnover desc;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

scode	turnover
S003	300
S004	150
S002	50
S001	30
NULL	NULL