

```
CREATE TABLE SPECTATOR50 (spec_id int, spec_name varchar(30), category varchar(15)
constraint c50 check (category in ('student','senior','adult')),
charge int);
```

```
insert into spectator50 values
(1,'Naresh','student',200);
insert into spectator50 values
(2,'Abhijay','adult',200);
insert into spectator50 values
(3,'Sunil','student',100);
insert into spectator50 values
(4,'Nitin','adult',400);
insert into spectator50 values
(5,'Subrato','senior',400);
```

```
alter table spectator50 alter column spec_id int NOT NULL;
```

```
alter table spectator50 add constraint pk PRIMARY KEY(spec_id);
```

	spec_id	spec_name	category	charge
1	1	Abhijay	student	500
2	2	Naresh	student	400
3	3	Amit	senior	2000
4	4	Abhishek	adult	20
5	5	Subrato	adult	200

	Name	Owner	Type	Created_datetime						
1	SPECTATOR50	dbo	usertable	2022-07-28 11:53:48.443						
	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	spec_id	int	no	4	10	0	no	(n/a)	(n/a)	NULL
2	spec_name	varchar	no	30			yes	no	yes	SQL_Latin1_General_CP1_CI_AS
3	category	varchar	no	15			yes	no	yes	SQL_Latin1_General_CP1_CI_AS
4	charge	int	no	4	10	0	yes	(n/a)	(n/a)	NULL

```
create table location50 ( loc_id int primary key, stadium varchar(30), city varchar(30), state
varchar(30));
```

```
insert into location50 values (4, 'Narendra Modi Stadium', 'Ahmedabad', 'Gujrat');
insert into location50 values (3, 'Salt Lake', 'Kolkata', 'West Bengal');
insert into location50 values (2, 'D.Y Patil Stadium', 'Navi Mumbai', 'Maharashtra');
insert into location50 values (1, 'Wankhede Stadium', 'Mumbai', 'Maharashtra');
```

```
create table game50 ( game_id int primary key, game_name varchar(40), game_type
varchar(30));
```

```
insert into game50 values(1,'Cricket','outdoor');
insert into game50 values(2,'Box Cricket','indoor');
insert into game50 values(3,'Basketball','outdoor');
insert into game50 values(4,'Chess','indoor');
insert into game50 values(5,'Badminton','outdoor');
```

	game_id	game_name	game_type
1	1	Cricket	outdoor
2	2	Box Cricket	indoor
3	3	Basketball	outdoor
4	4	Chess	indoor
5	5	Badminton	outdoor

```
select * from game50;
```

```
CREATE TABLE g_date50(dt_id int primary key,day varchar(20),month varchar(30),year
varchar(10));
```

```
insert into g_date50 values(1,'15','feb','2006');
insert into g_date50 values(2,'1','feb','2004');
insert into g_date50 values(3,'14','march','2005');
insert into g_date50 values(4,'7','june','2009');
insert into g_date50 values(5,'30','april','2006');
insert into g_date50 values(6,'19','dec','2012');
```

	dt_id	day	month	year
1	1	15	feb	2006
2	2	1	feb	2004
3	3	14	march	2005
4	4	7	june	2009
5	5	30	april	2006
6	6	19	dec	2012

```
create table game_stat50(spec_id int references spectator50(spec_id),
loc_id int references location50(loc_id),
game_id int references game50(game_id),
dt_id int references g_date50(dt_id),
charge int);
```

```
insert into game_stat50 VALUES(1,1,2,2,200);
```

```

insert into game_stat50 VALUES(1,2,1,3,500);
insert into game_stat50 VALUES(2,2,3,2,200);
insert into game_stat50 VALUES(3,3,4,4,500);
insert into game_stat50 VALUES(3,4,5,5,200);
insert into game_stat50 VALUES(4,4,2,6,200);

```

	spec_id	loc_id	game_id	dt_id	charge
1	1	1	2	2	200
2	1	2	1	3	500
3	2	2	3	2	200
4	3	3	4	4	500
5	3	4	5	5	200
6	4	4	2	6	200

Query:

```

select sum(gs.charge),spec.category,l.stadium,d.year
from game_stat50 gs,SPECTATOR50 spec,location50 l,g_date50 d
where gs.spec_id=spec.spec_id and
gs.dt_id=d.dt_id and
gs.dt_id=d.dt_id
group by spec.category,l.stadium,d.year
having spec.category='student'
and d.year='2006'
and l.stadium='D.Y Patil Stadium';

```

	(No column name)	category	stadium	year
1	200	student	D.Y Patil Stadium	2006

ETL:

```

create table salest50 (s_person varchar(15), item_sold int, price int, s_date date, item_category
varchar(20), no_of_items_sold int);

```

```

insert into salest50 values ( 'Om', 2, 1000, '01-FEB-2022', 'software',5);
insert into salest50 values ( 'Om', 1, 1000, '02-FEB-2022', 'software',4);
insert into salest50 values ( 'Abhijay', 1, 8000, '03-MAR-2022', 'hardware',6);
insert into salest50 values ( 'Abhijay', 2, 2000, '04-MAR-2022', 'hardware',9);
insert into salest50 values ( 'Naresh', 3, 1500, '04-DEC-2022', 'software',7);
insert into salest50 values ( 'Naresh', 2, 2000, '06-NOV-2022', 'hardware',2);

```

```
select * from salest50;
```

	s_person	item_sold	price	s_date	item_category	no_of_items_sold
1	Om	2	1000	2022-02-01	software	5
2	Om	2	1000	2022-02-01	software	5
3	Om	1	1000	2022-02-02	software	4
4	Abhijay	1	8000	2022-03-03	hardware	6
5	Abhijay	2	2000	2022-03-04	hardware	9
6	Naresh	3	1500	2022-12-04	software	7
7	Naresh	2	2000	2022-11-06	hardware	2

```
create table sales_details50
```

```
(sales_person varchar(30),
```

```
item_name varchar(30),
```

```
item_price int,
```

```
sales_date date,
```

```
branch varchar(30),
```

```
no_of_item_sold int);
```

```
insert into sales_details50 values('Om','Antivirus',1000,'1-Feb-2022','CST',10);
```

```
insert into sales_details50 values('Abhijay','Hard disk',8000,'3-March-2022','Thane',6);
```

```
insert into sales_details50 values('Om','OS',1000,'1-Feb-2022','Andheri',4);
```

```
insert into sales_details50 values('Naresh','Antivirus',1500,'14-Dec-2022','Andheri',7);
```

```
insert into sales_details50 values('Naresh','CPU',2000,'11-Nov-2022','CST',2);
```

```
select * from sales_details50;
```

	sales_person	item_name	item_price	sales_date	branch	no_of_item_sold
1	Om	Antivirus	1000	2022-02-01	CST	10
2	Abhijay	Hard disk	8000	2022-03-03	Thane	6
3	Om	OS	1000	2022-02-01	Andheri	4
4	Naresh	Antivirus	1500	2022-12-14	Andheri	7
5	Naresh	CPU	2000	2022-11-11	CST	2

Extraction:

```
create table sales_records50
```

```
(supplier varchar(15),
```

```
item_name varchar(10),
```

```
price int,
```

```
sales_dt date,
```

```
branch varchar(12),
```

```
item_category varchar(10),
num_item_sold int);
```

```
insert into sales_records50 select s_person,item_category,price,s_date,null,
item_category,no_of_items_sold from salest50 ;
```

```
select * from sales_records50;
```

	supplier	item_name	price	sales_dt	branch	item_category	num_item_sold
1	Om	software	1000	2022-02-01	NULL	software	5
2	Om	software	1000	2022-02-01	NULL	software	5
3	Om	software	1000	2022-02-02	NULL	software	4
4	Abhijay	hardware	8000	2022-03-03	NULL	hardware	6
5	Abhijay	hardware	2000	2022-03-04	NULL	hardware	9
6	Naresh	software	1500	2022-12-04	NULL	software	7
7	Naresh	hardware	2000	2022-11-06	NULL	hardware	2

```
insert into sales_records
select sales_person,item_name,item_price,sales_date,branch,
null,no_of_item_sold from sales_details;
```

```
select * from sales_records50;
```

	supplier	item_name	price	sales_dt	branch	item_category	num_item_sold
1	Om	software	1000	2022-02-01	NULL	software	5
2	Om	software	1000	2022-02-01	NULL	software	5
3	Om	software	1000	2022-02-02	NULL	software	4
4	Abhijay	hardware	8000	2022-03-03	NULL	hardware	6
5	Abhijay	hardware	2000	2022-03-04	NULL	hardware	9
6	Naresh	software	1500	2022-12-04	NULL	software	7
7	Naresh	hardware	2000	2022-11-06	NULL	hardware	2
8	Om	Antivirus	1000	2022-02-01	CST	NULL	10
9	Abhijay	Hard disk	8000	2022-03-03	Thane	NULL	6
10	Om	OS	1000	2022-02-01	And...	NULL	4
11	Naresh	Antivirus	1500	2022-12-14	And...	NULL	7
12	Naresh	CPU	2000	2022-11-11	CST	NULL	2

```
update sales_records50 set branch='unknown' where branch is null;
```

```
update sales_records50 set item_category='software' where item_name='AntiVirus';
```

```
update sales_records50 set item_category='hardware' where item_name in
('Hard disk');
```

	supplier	item_name	price	sales_dt	branch	item_category	num_item_sold
1	Om	software	1000	2022-02-01	unknown	software	5
2	Om	software	1000	2022-02-01	unknown	software	5
3	Om	software	1000	2022-02-02	unknown	software	4
4	Abhijay	hardware	8000	2022-03-03	unknown	hardware	6
5	Abhijay	hardware	2000	2022-03-04	unknown	hardware	9
6	Naresh	software	1500	2022-12-04	unknown	software	7
7	Naresh	hardware	2000	2022-11-06	unknown	hardware	2
8	Om	Antivirus	1000	2022-02-01	CST	software	10
9	Abhijay	Hard disk	8000	2022-03-03	Thane	hardware	6
10	Om	OS	1000	2022-02-01	Andheri	software	4
11	Naresh	Antivirus	1500	2022-12-14	Andheri	software	7
12	Naresh	CPU	2000	2022-11-11	CST	hardware	2

```
update sales_records50 set num_item_sold=(select avg(num_item_sold)
from sales_records50) where item_name='AntiVirus';
```

```
update sales_records50 set num_item_sold=(select avg(num_item_sold)
from sales_records50) where item_name in('CPU','HardDisk');
```

```
select * from sales_records50;
```

	supplier	item_name	price	sales_dt	branch	item_category	num_item_sold
1	Om	software	1000	2022-02-01	unknown	software	5
2	Om	software	1000	2022-02-01	unknown	software	5
3	Om	software	1000	2022-02-02	unknown	software	4
4	Abhijay	hardware	8000	2022-03-03	unknown	hardware	6
5	Abhijay	hardware	2000	2022-03-04	unknown	hardware	9
6	Naresh	software	1500	2022-12-04	unknown	software	7
7	Naresh	hardware	2000	2022-11-06	unknown	hardware	2
8	Om	Antivirus	1000	2022-02-01	CST	software	5
9	Abhijay	Hard disk	8000	2022-03-03	Thane	hardware	6
10	Om	OS	1000	2022-02-01	Andheri	software	4
11	Naresh	Antivirus	1500	2022-12-14	Andheri	software	5
12	Naresh	CPU	2000	2022-11-11	CST	hardware	5

Loading:

```
create view catalog1 as (select sum(price*num_item_sold) as yearly_sale,format(convert
(Datetime, sales_dt),'yyyy') as year from sales_records50
group by format(convert (Datetime, sales_dt),'yyyy'));
```

```
select * from catalog1;
```

	yearly_sale	year
1	89500	2022

```
create view catalog2 as (select sum(price*num_item_sold) as yearly_sale, format(convert
(Datetime, sales_dt),'yy')
as year from sales_records group by format(convert (Datetime, sales_dt),'yy'));
```

```
select * from catalog2;
```

	yearly_sale	year
1	1060500	12

```
create view category as (select * from sales_records50 where item_category='software');
```

```
select * from category;
```

	supplier	item_name	price	sales_dt	branch	item_category	num_item_sold
1	Om	software	1000	2022-02-01	NULL	software	5
2	Om	software	1000	2022-02-02	NULL	software	4
3	Naresh	software	1500	2022-12-04	NULL	software	7