# Go, change the world



# RV Educational Institutions ® RV College of Engineering ®

Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi Approved by AICTE, New Delhi

> Report On

# Java Based Software Solutions 20MCA262

Sweet Mart Shop

Submitted in Partial Fulfillment of the Requirement for the II Semester MCA

#### MASTER OF COMPUTER APPLICATIONS

By

1RV21MC052	KISHANKUMAR DAHIYA
1RV21MC010	ALTAMISH CHOWDHURY

# **Under the Incharge** of

Prof. Prashant K Assistant Professor

Department of Master of Computer Applications RV College of Engineering®, Mysuru Road RV Vidyanikethan Post, Bengaluru – 560059

October -2022

# **Assignment Mark**

#### ASSIGNMENT -I

SL NO	MAX MARKS	MARKS
1		
2		
3		

#### ASSIGNMENT -II

SL NO	MAX MARKS	MARKS
1		
2		
3		



# **CERTIFICATE**

This is to certify that Mr **Kishankumar Dahiya**, USN **1RV21MC052** 2<sup>nd</sup> semester Master of Computer Applications program has satisfactorily completed the Assignment titled "**Sweet Mart Shop** in **Java Based Software Solutions – 20MCA262** as a part of Continuous Internal Assessment.

**Prof. Prashant K**Associate Professor
Department of MCA
RVCE, Bengaluru –59

**Dr. Andhe Dharani**Professor and Director
Department of MCA
RVCE, Bengaluru–59

# **INDEX PAGE**

SL.NO	PARTICULARS	PAGE NO
1.	PROBLEM STATEMENT	
2.	DATABASE DESIGN	
3.	IMPLEMENTATION	

# PROBLEM STATEMENT

Jai Ambe Sweet mart has been in business for past 30 years. There are 4 employees working on different shifts at the store. They sell various types of snacks, sweets and drinks available in variable quantity. The items are imported from distributers. All of their daily sales are logged on the ledger for future reference. They have a set of loyal customers from daily sales who give special order at a times. Jai Ambe sweet mart doesn't produce the sweets or snacks at their factory but import and resell from various distributors. Each of the customers who have given special order provided their contact to reach out once the order is ready. The price for items are all logged in and each item is uniquely identified by their ID, quantity respectively.

### Key points:

- Food id and distributor id then buy price sell price
- Food 3 categories Sweets Snacks and Drinks
- Each food in Respective category having different costs for quantities

# The items are priced in following manner

- For sweet increase sell price by 25%
- For Drinks increase sell price by 10%
- For Snacks increase sell price by 15%

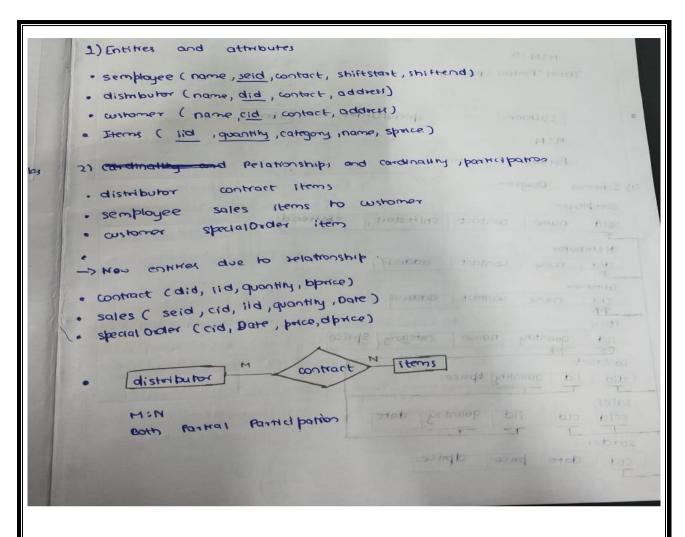
# **DATABASE DESIGN**

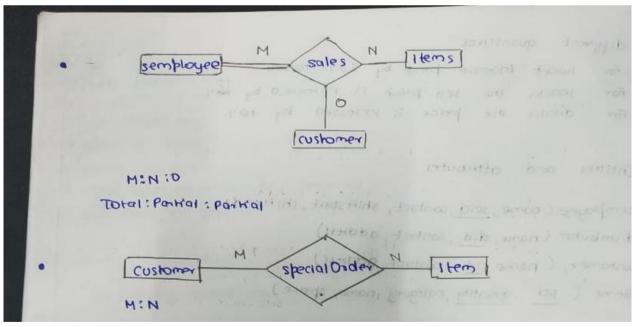
# 1) ENTITIES AND ATTRIBUTES

- semployee(name, seid, contact, shiftstart, shiftend)
- distributor (did, name, contact, address)
- customer (cid, name, contact, address)
- Items (iid, name, category, quantity, sprice)
- sales (seid, cid, iid, quantity, date)
- specialOrder (cid, date, price, dprice)
- import/contract(did, iid, quantity, bprice)

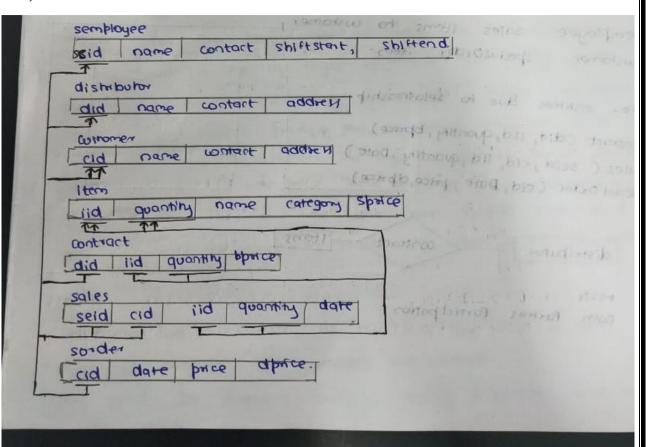
# 2) RELATIONSHIP AND CARDINALITY

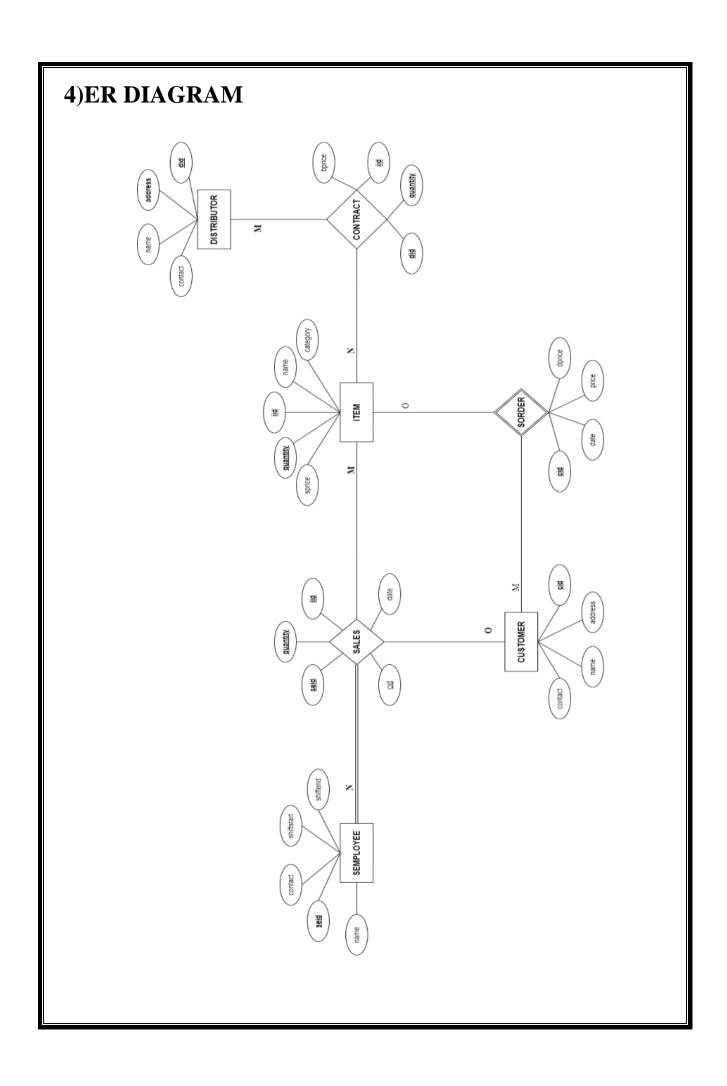
- distributor **contract** items
  - M:N Partial: Partial
- Semployee sales item to customer
  - M:N:O Total: Partial: Partial
- customer specialOrder item
  - M:N Partial: Partial





# 3)SCHEMA DIAGRAM





### 5)TABLE CREATION

- create table semployee(seid varchar(20) primary key,name varchar(20),contact bigint(20),shiftstart time,shiftend time);
- create table customer(cid varchar(20) primary key,name varchar(20),contact bigint(20),address varchar(20));
- create table distributor(did varchar(20) primary key,name varchar(20),contact bigint(20),address varchar(20));
- create table item(iid varchar(20),quantity varchar(20),category varchar(20),name varchar(20),sprice int(10),index(iid),index(quantity),primary key(iid,quantity));
- create table contract(did varchar(20),iid varchar(20),quantity varchar(20),bprice int,foreign key(did) references distributor(did),foreign key(iid) references item(iid),foreign key(quantity) references item(quantity),primary key(did,iid,quantity));
- varchar(20),cid varchar(20),iid table sales(seid create varchar(20), quantity varchar(20), Date date, foreign key(seid) semployee(seid),foreign key(cid) references references customer(cid),foreign key(iid) references item(iid),foreign key(quantity) references item(quantity),primary key(seid,cid,iid,quantity));
- create table sorder( cid varchar(20),Date date,price int,dprice int,foreign key(cid) references customer(cid));

#### 6) VALUES INSERTION

## 1. semployee(seid,name,contact,shiftstart,shiftend);

create table semployee(seid varchar(20) primary key,name varchar(20),contact bigint(20),shiftstart time,shiftend time);

```
insert into semployee values("s001","Krupa",123321,"08:00:00","12:00:00"); insert into semployee values("s002","Daizy",123322,"12:00:00","16:00:00"); insert into semployee values("s003","Jayshah",123323,"16:00:00","20:00:00"); insert into semployee values("s004","Kiran",123324,"08:00:00","12:00:00"); insert into semployee values("s005","Dashline",123325,"12:00:00","16:00:00"); insert into semployee values("s006","Jaya",123326,"16:00:00","20:00:00");
```

# 2. distributor(did,name,contact,address);

create table distributor(did varchar(20) primary key,name varchar(20),contact bigint(20),address varchar(20));

```
insert into distributor values("d001","Vishal",123331,"Ankola"); insert into distributor values("d002","Chandan",123332,"Ankola"); insert into distributor values("d003","Usha",123333,"Karwar"); insert into distributor values("d004","Prashant",123334,"Kumta"); insert into distributor values("d005","Preeti",123335,"Gokarna");
```

# 3. customer(cid,name,contact,address);

create table customer(cid varchar(20) primary key,name varchar(20),contact bigint(20),address varchar(20));

insert into customer values("c001","Pavan",123311,"Ankola"); insert into customer values("c002","Rukhaya",123312,"Ankola"); insert into customer values("c003","Pavitra",123313,"Karwar"); insert into customer values("c004","Winil",123314,"Ankola"); insert into customer values("c005","Rakshitha",123315,"Gokarna"); insert into customer values("c006","Rakshit",123316,"Ankola"); insert into customer values("c007","Rohan",123317,"Goa"); insert into customer values("c008","Madhuri",123318,"Belgaum"); insert into customer values("c009","Rosalia",123319,"Dharwad"); insert into customer values("c010","Mahesh",123320,"Hubli");

\_\_\_\_\_

## 4. item(iid,quantity,category,name,sprice);

create table item(iid varchar(20),quantity varchar(20),category varchar(20),name varchar(20),sprice int(10),index(iid),index(quantity),primary key(iid,quantity));

#### snacks:

insert into item values("i001","500gm","snack","Aloo Bhujia",140); insert into item values("i001","1000gm","snack","Aloo Bhujia",280); insert into item values("i002","500gm","snack","Khara Boondi",80); insert into item values("i002","1000gm","snack","Khara Boondi",160); insert into item values("i003","500gm","snack","Plain Sev",80); insert into item values("i003","1000gm","snack","Plain Sev",160); insert into item values("i004","500gm","snack","Mix Khara",100); insert into item values("i004","1000gm","snack","Mix Khara",200); insert into item values("i005","500gm","snack","Sweet Khara",100); insert into item values("i005","500gm","snack","Sweet Khara",200);

#### sweets;

insert into item values("i006","500gm","sweet","Pista Burfi",200);

```
insert into item values("i006","1000gm","sweet","Pista Burfi",400);
insert into item values("i007","500gm","sweet","Dharwad Peda",140);
                          values("i007","1000gm","sweet","Dharwad
insert
         into
                 item
Peda",280);
insert into item values("i008","500gm","sweet","Gulab Jamun",180);
insert into item values("i008","1000gm","sweet","Gulab Jamun",360);
insert into item values("i009","500gm","sweet","Mysore Pak",160);
insert into item values("i009","1000gm","sweet","Mysore Pak",320);
insert into item values("i010","500gm","sweet","Kaju Kathli",200);
insert into item values("i010","1000gm","sweet","Kaju Kathli",400);
drinks:
insert into item values("i011","750ml","drink","Sprite",40);
insert into item values("i011","1250ml","drink","Sprite",65);
insert into item values("i012","750ml","drink","Cocacola",40);
insert into item values("i012","1250ml","drink","Cocacola",65);
insert into item values("i013","750ml","drink","Fanta",40);
insert into item values("i013","1250ml","drink","Fanta",65);
insert into item values("i014","750ml","drink","Soda",20);
insert into item values("i014","1250ml","drink","Soda",40);
insert into item values("i015","250ml","drink","Badam Milk",35);
insert into item values("i015","500ml","drink","Badam Milk",60);
```

## 5. contract(did,iid,quantity,bprice);

```
create table contract(did varchar(20),iid varchar(20),quantity varchar(20),bprice int,foreign key(did) references distributor(did),foreign key(iid) references item(iid),foreign key(quantity) references item(quantity),primary key(did,iid,quantity));
```

```
snack;
distributor 1;
insert into contract values("d001","i001","500gm",120);
insert into contract values("d001","i001","1000gm",240);
insert into contract values("d001","i002","500gm",60);
```

```
insert into contract values("d001","i002","1000gm",120);
insert into contract values("d001","i003","500gm",60);
insert into contract values("d001","i003","1000gm",120);
insert into contract values("d001","i004","500gm",80);
insert into contract values("d001","i004","1000gm",160);
insert into contract values("d001","i005","500gm",80);
insert into contract values("d001","i005","1000gm",160);
distributor 2;
insert into contract values("d002","i001","500gm",130);
insert into contract values("d002","i001","1000gm",260);
insert into contract values("d002","i002","500gm",70);
insert into contract values("d002","i002","1000gm",140);
insert into contract values("d002","i003","500gm",70);
insert into contract values("d002","i003","1000gm",140);
insert into contract values("d002","i004","500gm",90);
insert into contract values("d002","i004","1000gm",180);
insert into contract values("d002","i005","500gm",90);
insert into contract values("d002","i005","1000gm",180);
sweets;
distributor 1:
insert into contract values("d001","i006","500gm",180);
insert into contract values("d001","i006","1000gm",360);
insert into contract values("d001","i007","500gm",120);
insert into contract values("d001","i007","1000gm",240);
insert into contract values("d001","i008","500gm",160);
insert into contract values("d001","i008","1000gm",320);
insert into contract values("d001","i009","500gm",140);
insert into contract values("d001","i009","1000gm",280);
insert into contract values("d001","i010","500gm",180);
insert into contract values("d001","i010","1000gm",360);
distributor 3;
insert into contract values("d003","i006","500gm",190);
insert into contract values("d003","i006","1000gm",380);
insert into contract values("d003","i007","500gm",130);
```

```
insert into contract values("d003","i007","1000gm",260);
insert into contract values("d003","i008","500gm",170);
insert into contract values("d003","i008","1000gm",340);
insert into contract values("d003","i009","500gm",150);
insert into contract values("d003","i009","1000gm",300);
insert into contract values("d003","i010","500gm",190);
insert into contract values("d003","i010","1000gm",380);
drinks:
distributor 1:
insert into contract values("d001","i011","750ml",37);
insert into contract values("d001","i011","1250ml",60);
insert into contract values("d001","i012","750ml",37);
insert into contract values("d001","i012","1250ml",60);
insert into contract values("d001","i013","750ml",37);
insert into contract values("d001","i013","1250ml",60);
insert into contract values("d001","i014","750ml",17);
insert into contract values("d001","i014","1250ml",35);
insert into contract values("d001","i015","250ml",32);
insert into contract values("d001","i015","500ml",55);
distributor 5:
insert into contract values("d005","i011","750ml",38);
insert into contract values("d005","i011","1250ml",62);
insert into contract values("d005","i012","750ml",38);
insert into contract values("d005","i012","1250ml",62);
insert into contract values("d005","i013","750ml",38);
insert into contract values("d005","i013","1250ml",62);
insert into contract values("d005","i014","750ml",18);
insert into contract values("d005","i014","1250ml",37);
insert into contract values("d005","i015","250ml",33);
insert into contract values("d005","i015","500ml",57);
```

distributor 4 supplies no items;

\_\_\_\_\_

# 6. sales(seid,cid,iid,quantity,Date);

table sales(seid varchar(20),cid varchar(20),iid create foreign varchar(20), quantity varchar(20), Date key(seid) date. semployee(seid),foreign key(cid) references references references customer(cid),foreign key(iid) item(iid),foreign key(quantity) references item(quantity),primary kev(seid.cid.iid.quantity));

sales from 10 Feb to 12 Feb, shift 8am to 12pm by employee 1 and 2; insert into sales values("s001","c001","i001","1000gm","2022-02-10");

insert into sales values("s001","c001","i002","500gm","2022-02-10"); insert into sales values("s001","c001","i003","1000gm","2022-02-10");

insert into sales values("s001","c002","i003","500gm","2022-02-10"); insert into sales values("s001","c002","i005","1000gm","2022-02-11");

insert into sales values("s002","c002","i001","500gm","2022-02-11"); insert into sales values("s002","c002","i002","1000gm","2022-02-11");

insert into sales values("s002","c003","i004","500gm","2022-02-11"); insert into sales values("s002","c003","i005","500gm","2022-02-11"); insert into sales values("s002","c004","i001","1000gm","2022-02-12");

insert into sales values("s001","c004","i004","500gm","2022-02-12"); insert into sales values("s001","c005","i002","1000gm","2022-02-12");

insert into sales values("s002","c004","i005","500gm","2022-02-12"); insert into sales values("s002","c005","i003","1000gm","2022-02-12");

sales from 10 Feb to 12 Feb, shift 12pm to 4pm by employee 3 and 4; insert into sales values("s003","c006","i006","1000gm","2022-02-10");

```
insert into sales values("s003","c007","i007","500gm","2022-02-10");
insert into sales values("s003","c006","i008","1000gm","2022-02-
10");
insert into sales values("s003","c007","i008","500gm","2022-02-10");
insert into sales values("s003","c010","i009","1000gm","2022-02-
11");
insert into sales values("s004","c006","i006","500gm","2022-02-11");
insert into sales values("s004","c010","i007","1000gm","2022-02-
11");
insert into sales values("s003","c006","i010","500gm","2022-02-11");
insert into sales values("s004","c007","i009","500gm","2022-02-11");
insert into sales values("s003","c004","i006","1000gm","2022-02-
12");
insert into sales values("s003","c007","i010","500gm","2022-02-12");
insert into sales values("s003","c005","i007","1000gm","2022-02-
12");
insert into sales values("s004","c004","i012","750ml","2022-02-12");
insert into sales values("s003","c005","i008","1000gm","2022-02-
12");
```

sales from 10 Feb to 12 Feb, shift 4pm to 8pm by employee 5 and 6; insert into sales values("s006","c010","i011","1250ml","2022-02-10"); insert into sales values("s006","c008","i012","1250ml","2022-02-10"); insert into sales values("s006","c009","i013","1250ml","2022-02-12"); insert into sales values("s006","c002","i011","750ml","2022-02-12"); insert into sales values("s006","c009","i015","250ml","2022-02-11"); insert into sales values("s006","c008","i013","1250ml","2022-02-11"); insert into sales values("s006","c010","i014","750ml","2022-02-11");

# Employee 5 has been absent for these days;

# 7. sorder(cid,Date,price,dprice);

create table sorder( cid varchar(20),Date date,price int,dprice int,foreign key(cid) references customer(cid));

Special Orders of February 2022; insert into sorder values("c002","2022-02-04",800,50); insert into sorder values("c002","2022-02-04",400,50); insert into sorder values("c001","2022-02-07",800,50); insert into sorder values("c004","2022-02-08",1800,150); insert into sorder values("c003","2022-02-02",900,120); insert into sorder values("c007","2022-02-09",1400,60); insert into sorder values("c009","2022-02-12",1110,50); insert into sorder values("c010","2022-02-16",2400,120); insert into sorder values("c010","2022-02-24",400,20); insert into sorder values("c005","2022-02-22",500,20); insert into sorder values("c003","2022-02-21",400,50); insert into sorder values("c007","2022-02-28",1200,50); insert into sorder values("c009","2022-02-25",1800,120); insert into sorder values("c004","2022-02-06",936,68); insert into sorder values("c001","2022-02-14",800,50);

# **Queries on the Database**

#### 1)List the total amount of the all the special orders given by the

#### loyal customers over the time and names of customer.

select c.name as Customer\_Name, (s.price+s.dprice) as

Total\_Amount from customer c , sorder s where c.cid=s.cid group

by(c.name) having sum(s.price+s.dprice);

## 2)Display the loyal customer who has given the maximum amount

```
MySQL localhost:3306 ssl jbs SQL > select c.name as Customer,(s.price+s.dprice) from customer c, sorder s where c.cid=s.cid group by(c.name) having max(s.price+s.dprice)=ALL(select max(s.price+s.dprice) from sorder s);

| Customer | (s.price+s.dprice) |
| Mahesh | 2520 |
| 1 row in set (0.0014 sec)
| MySQL localhost:3306 ssl jbs SQL >
```

# of order in term of money during overall period of time.

select c.name as Customer,(s.price+s.dprice) from customer c, sorder s where c.cid=s.cid group by(c.name) having max(s.price+s.dprice)=ALL(select max(s.price+s.dprice) from sorder s);

# 3)Display the loyal customer who has given the minimum amount



# of order in term of money during overall period of time.

select c.name as Customer,(s.price+s.dprice) from customer c, sorder s where c.cid=s.cid and (s.price+s.dprice)=(select min(s.price+s.dprice) from sorder s);

# 4)List the total number of special orders placed by loyal customers.



select c.name as Customer\_Name, count(s.price+s.dprice) as Total\_Amount from customer c , sorder s where c.cid=s.cid group by(c.name) having count(s.price+s.dprice);

# 5)List the customers who have given special order of amount

# more than average special order amount

select c.name as Customer,(s.price+s.dprice) from customer c, sorder s where c.cid=s.cid and (s.price+s.dprice)>(select avg(s.price+s.dprice) from sorder s);

# 6)Display the total amount of sales made by each employee for the overall time



select s.seid,e.name,sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.seid) having sum(i.sprice);

#### 7)Display employee details of employee with max sales

```
| NySQL | localhost:3306 ssl | jbs | SQL | select e.*, sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.seid) having sum(i.sprice)=ALL(select sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity y group by(s.seid) having sum(i.sprice));
| seid | name | contact | shiftstart | shiftend | sum(i.sprice) |
| seid | name | contact | shiftstart | shiftend | sum(i.sprice) |
| seid | name | 123323 | 16:00:00 | 20:00:00 | 2840 |
```

select e.\*,sum(i.sprice) from semployee e,item i, sales s where
e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.seid)
having sum(i.sprice)>=ALL(select sum(i.sprice) from semployee
e,item i, sales s where e.seid=s.seid and i.iid=s.iid and
i.quantity=s.quantity group by(s.seid) having sum(i.sprice));

#### 8) Display employee details of employee with least sales



select e.\*,sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.seid) having sum(i.sprice)<=ALL(select sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.seid) having sum(i.sprice));

## 9)Display total sales at each shift throughout the day



select e.shiftstart,e.shiftend,sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(e.shiftstart) having sum(i.sprice);

# 10) Display total sales of employee by shift, must include all employee and their shift time

```
| Some in set (0.0011 sec) | Solid | S
```

select e.name,e.shiftstart,e.shiftend, sum(i.sprice) from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(e.seid) having sum(i.sprice);

#### 11)Display Employee details who has not done any sales

select distinct e.\* from semployee e where e.seid not in(select seid from sales);

# 12)Display how much profit will generated by items purchased from each distributor on the sales overall

```
MySQL localnost:3386 ssl jbs SQL > select d.did, sum(i.sprice-c.bprice) as Profit_From_Sale from distributor d, contract c , item i where d.did=c.did and i.iid=c.iid and i.quantity=c.quantity group by d.did having sum(i.sprice-c.bprice);

| did | Profit_From_Sale |
| deel | 648 |
| deel | 55 |
| deel | 150 |
| deel | 25 |

4 rows in set (0.0023 sec)
```

select d.did, sum(i.sprice-c.bprice) as Profit\_From\_Sale from distributor d, contract c, item i where d.did=c.did and i.iid=c.iid and i.quantity=c.quantity group by d.did having sum(i.sprice-c.bprice);

# 13) Display the Total Sales by day

select s.date,sum(i.sprice) as Total\_Sales from semployee e,item i, sales s where e.seid=s.seid and i.iid=s.iid and i.quantity=s.quantity group by(s.date) having sum(i.sprice);

# 14) Display overall sales of each item by each quantity



select s.iid,i.name,s.quantity,count(\*) from item i, sales s where
i.iid=s.iid and i.quantity=s.quantity group by s.iid,s.quantity having
count(\*);

#### 15) Which item is most popular (sold most)

select s.iid,i.name,count(\*) from item i, sales s where i.iid=s.iid and i.quantity=s.quantity group by(s.iid) having count(s.quantity)>=ALL(select count(\*) from item i, sales s where i.iid=s.iid and i.quantity=s.quantity group by(s.iid) having count(s.quantity));

## 16) Give the average sale of each item sold.



select i.iid,i.name,count(\*)/(select count(\*) from item i, sales s where i.iid=s.iid and i.quantity=s.quantity) as Average\_of\_Sales from item i, sales s where i.iid=s.iid and i.quantity=s.quantity group by(s.iid) having count(s.quantity);

# **IMPLEMENTATION**

