```sql
/* Create a table called NAMES */
CREATE TABLE Client(
ID int PRIMARY KEY,
Fname varchar(10) not null,
Lname varchar(10) not null,
password varchar(8) not null,
address varchar(10),
Email varchar(15) not null);

CREATE TABLE Client_phone(
Phone_number int primary key ,
ID int not null,
foreign key (ID) references Client (ID));

CREATE TABLE Purcheser(
ship_address varchar(10) not null,
ID int not null,
foreign key (ID) references Client (ID));


CREATE TABLE Supplier(
Bank_account_no int not null ,
ID int not null,
foreign key (ID) references Client (ID));

CREATE TABLE Auction(
Auc_id int PRIMARY KEY,
Start_price int not null,
increment float not null,
reserve int not null,
expiration date,
discription varchar(15),
ID  not null,
foreign key (ID) references Supplier (ID));


CREATE TABLE Bid(
Bid_id int PRIMARY KEY,
price int not null,
Time_Stamp timestamp,
Auc_id int not null,
Item_id int not null,
ID int not null,
```

```
foreign key (Auc_id) references Auction (Auc_id),
foreign key (Item_id) references Computer_Item (Item_id),
foreign key (ID) references Purcheser (ID));

CREATE TABLE Bill(
Bill_id int PRIMARY KEY,
order_date date not null,
quantity int not null,
Bid_id int not null,
foreign key (Bid_id) references Bid (Bid_id));

CREATE TABLE Replace_item(
Bill_id int not null,
Correct_specification varchar(20),
foreign key (Bill_id) references Bill (Bill_id));


CREATE TABLE Return_item(
Bill_id int not null,
Reasin varchar(20),
foreign key (Bill_id) references Bill (Bill_id));

CREATE TABLE Bill_problem(
Bill_id int not null,
foreign key (Bill_id) references Bill (Bill_id));

CREATE TABLE Computer_Item(
Item_id int PRIMARY KEY,
description varchar(15) ,
title varchar(15),
start_bid_price int,
ID int not null,
foreign key (ID) references Supplier(ID));


CREATE TABLE Computer_accessories(
cost int,
Computer_type varchar(10) ,
manufacture varchar(10)  ,
Name varchar(10),
Item_id int not null,
ID int not null,
foreign key (Item_id) references Computer_Item (Item_id),
```

```sql
foreign key (ID) references Supplier(ID));

CREATE TABLE Hardware(
Memory varchar(5),
Speed int ,
Storage varchar(5)  ,
Item_id int not null,
ID int not null,
foreign key (Item_id) references Computer_Item (Item_id),
foreign key (ID) references Supplier(ID));

CREATE TABLE SoftWare(
Item_id int not null,
year_of_manufacture date ,
manufacture varchar(100) ,
version float,
cost float,
Author varchar(10),
ID int not null,
foreign key (Item_id) references Computer_Item (Item_id),
foreign key (ID) references Supplier(ID));

CREATE TABLE Comment(
Discription varchar(15),
rating int ,
ID int  not null,
Bill_id int not null,
foreign key (ID) references Client (ID),
foreign key (Bill_id) references Bill (Bill_id));

CREATE TABLE Written_on(
Bill_id int not null,
foreign key (Bill_id) references Bill (Bill_id));

CREATE view Supplier_items
as
select Fname,Lname,address,Supplier.ID,count(Item_id) as No_of_items,address
from Client natural join Supplier natural join Computer_Item;


CREATE view Winner_Detailes
as
select Computer_Item.title as itemTitle,Fname,Lname
```

```sql
from bill natural join Bid
natural join Purcheser
natural join Client
natural join Computer_Item;


insert into Client
values (333,'james','smith',1234,'UAE dubai','james@gmail.com'),
(444,'ghada','mohammed',5432,'saudi arabia jeddah','ghada@gmail.com'),
(555,'Arwa','khalid',9876,'saudi arabia dahran','arwa@gmail.com'),
(666,'faris','omar',8901,'saudi arabia riyadh','faris@gmail.com'),
(777,'sultan','ahmed',7841,'saudi arabia dammam','sultan@gmail.com'),
(888,'faisal','karim',1306,'UAE dubai','faisal@gmail.com'),
(999,'salem','abdullah',1423,'saudi arabia riyadh','salem@gmail.com'),
(100,'waad','mustafa',1899,'saudi arabia riyadh','waad@gmail.com');

insert into Client_phone
values (05012300,333),
(05324556,444),
(05554322,555),
(05789990,666),
(05349192,777),
(05923770,888),
(05011000,999),
(05222330,100);

insert into Purcheser
values ('riyadh',333),
('jeddah',444),
('dammam',777),
('dubai',888);

insert into Supplier
values (620000012333,555),
(620000012333,666),
(620000098765,999),
(620000056748,100);


insert into Auction
values (10,200,0.1,100,'2-1-2020',null,555),
(11,1500,0.2,170,'20-12-2019',null,666);



insert into Computer_Item
```

```
values
(22,null,'iOS',50,555),
(33,null,'Andeoid',170,666),
(44,null,'galaxy',128,999),
(55,null,'macDestop',1000,100),
(66,null,'huawiiLaptp',null,999),
(77,null,'macBook pro',null,100);

insert into Bid
values
(1,50, '2-1-2020 21:22:23',10,22,333),
(2,170, '20-12-2019 1:02:10',11,33,444),
(3,20, '20-12-2019 1:02:10',11,33,444),
(4,1000, '20-12-2019 1:02:10',11,33,444);


insert into Hardware
values
('200 RAM','4.7GHz','256GB',44,999),
('170 RAM','3.3GHz','128GB',55,100),
('180 RAM','2.7GHz','64GB',66,999),
('200 RAM','5.3GHz','256GB',77,100);

insert into SoftWare
values
(22,2020,'apple',1.04,2500,'steve',555),
(33,2018,'samsung',3.01,1750,'kim',666);


insert into Bill
values
(01,'6-1-2020',1,1),
(02,'27-12-2019',1,2);


insert into Comment
values
('Ecxellent!',5,333,01),
('very bad!',1,444,02),
('good transaction',5,999,01),
('i am happy with this transaction!',5,100,02);

insert into Written_on
values
(01),
(02);
```

```sql
insert into Computer_accessories
values(10,'huawiiLaptp','Laptop Stickers','alain for electronics',66,999),
(255,'huawiiLaptp','Laptop cover','alain for electronics',77,999);


insert into Replace_item
values(01,'2021');


insert into Return_item
values(02,'i found a better item');


insert into Bill_problem
values(01),(02);


select count(Bid_id),MAX(price),title
from Bid , Computer_Item
where Bid.Item_id=Computer_Item.Item_id;


select Fname,Lname,count(Item_id)
from  ((Client natural join Supplier) natural join Computer_Item);

select Fname,Lname,ID,count(Bid_id)
from Purcheser natural join Client natural join Bid
where  Bid_id>3;


select title ,avg(price),count(Bid_id)
from Computer_Item join Bid on Computer_Item.Item_id=Bid.Item_id
group by title;

select title,Item_id
from Computer_Item
where start_bid_price isnull;

select Fname,Lname
from (Client natural join Comment)
where rating>=3;

select Fname,Lname,ID,address
from Client natural join Purcheser
```

```sql
where address like 'saudi arabia%';

select Fname ,Lname,ID,No_of_items ,address
from Supplier_items
where address like '% riyadh' and No_of_items>2;

select *
from Computer_accessories;

select *
from Replace_item;

select *
from Return_item;

select *
from Bill_problem;
```