

CustomizedERP

DBMS ASSIGNMENT-1

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Abstract:

The goal of this project is develop an ER model for a database that helps a stakeholder to store his business details. The model will include entities such as customer, supplier, payment and associatives to connect them .The resulting database will allow stakeholder to store the details of the customers, suppliers separately in tables and know quantity of the particular product of available and can keep the record of the payments received and payments done to the receiver. I have taken An example of digital electronics selling website database as given below and data can be stored for any business as per the requirements of stakeholder.

Requirements:

Tables that I have identified are:

Customer,supplier,product,sales_order,purchase_order,payment,sales_invoice

1.customer table:

TABLE CUSTOMER

Column	Null?	Type
C_ID	NOT NULL	VARCHAR2(4)
C_NAME	NOT NULL	CHAR(15)
C_PHONE	-	NUMBER
C_CITY	-	CHAR(15)

2.Supplier table:

TABLE SUPPLIER

Column	Null?	Type
S_ID	-	VARCHAR2(5)
S_NAME	-	VARCHAR2(15)
S_CITY	-	VARCHAR2(15)
S_PHONE	-	NUMBER(10,0)

3.product:

TABLE PRODUCT

Column	Null?	Type
PID	NOT NULL	VARCHAR2(4)
P_NAME	-	CHAR(15)
P_PRICE	-	NUMBER(7,0)
QUANTITY_ON_HAND	-	NUMBER(4,0)

4.sales_order:

TABLE SALES_ORDER

Column	Null?	Type
SO_ID	NOT NULL	VARCHAR2(5)
C_ID	NOT NULL	VARCHAR2(4)
PID	NOT NULL	VARCHAR2(4)
QUANTITY	NOT NULL	NUMBER(2,0)

5.purchase_order:

TABLE PURCHASE_ORDER

Column	Null?	Type
PO_ID	NOT NULL	VARCHAR2(5)
S_ID	NOT NULL	VARCHAR2(4)
PID	NOT NULL	VARCHAR2(4)
QUANTITY	NOT NULL	NUMBER(4,0)

6.payment:

TABLE PAYMENT

Column	Null?	Type
PA_ID	NOT NULL	VARCHAR2(6)
PA_DATE	-	DATE
AMOUNT_PAID	-	NUMBER(10,0)

7.Invoice_of_sales:

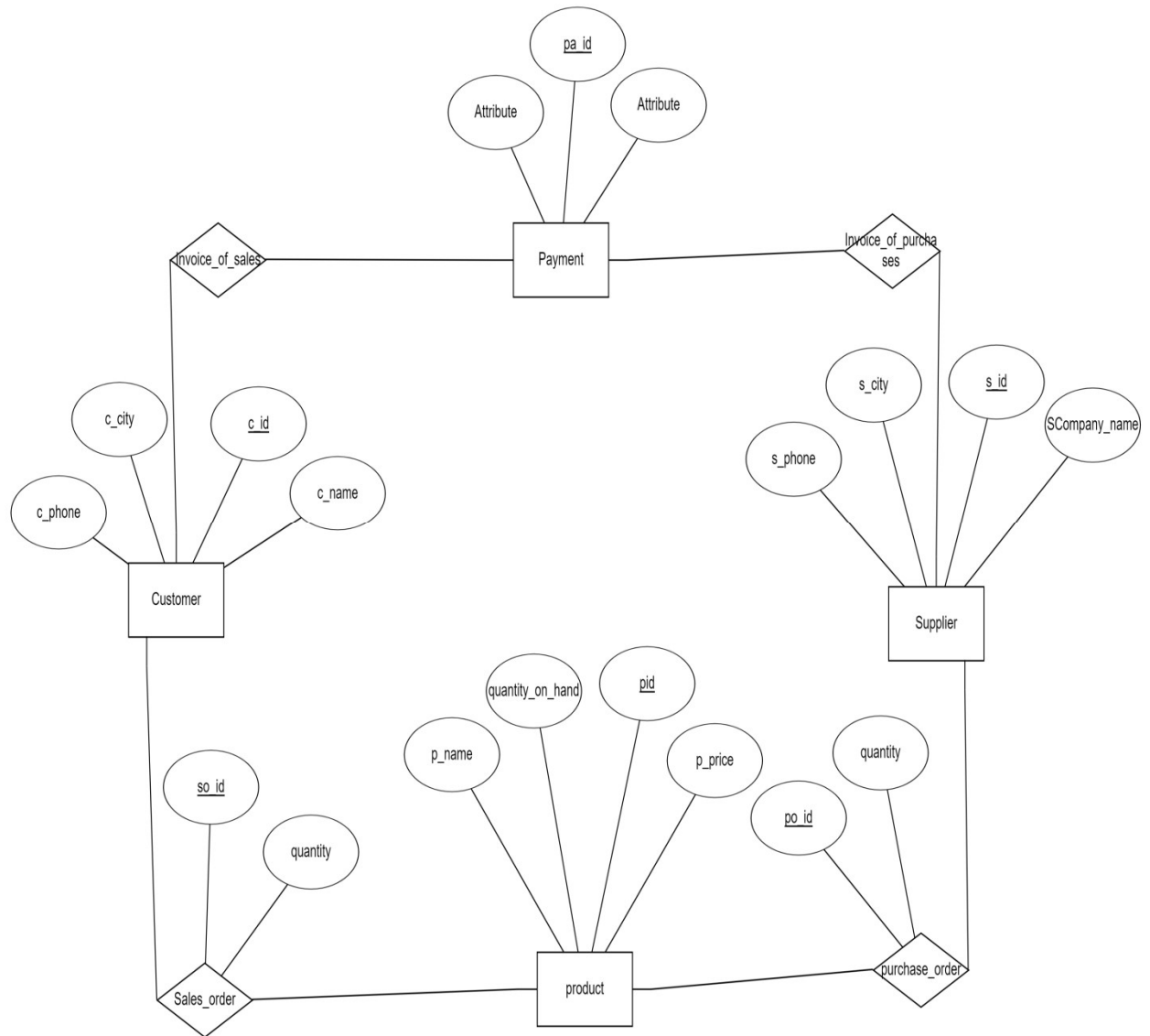
TABLE INVOICE_OF_SALES

Column	Null?	Type
C_ID	-	VARCHAR2(4)
PID	-	VARCHAR2(4)
PA_ID	-	VARCHAR2(6)
INV_ID	NOT NULL	VARCHAR2(6)

8.Invoice_of_purchases:

TABLE INVOICE_OF_PURCHASES

Column	Null?	Type
INV_ID	NOT NULL	VARCHAR2(6)
PA_ID	-	VARCHAR2(6)
PID	-	VARCHAR2(4)
S_ID	-	VARCHAR2(4)



DDL COMMANDS:

1.creating table for customer with constraints:

Query : create table customer(
 c_id varchar(4),
 c_name char(15),
 c_phone int,
 c_city char(15))

alter table customer add primary key(c_id)

SQL Worksheet

```
1 v create table customer(  
2     c_id varchar(4),  
3     c_name char(15),  
4     c_phone int,  
5     c_city char(15));
```

Table created.

2.creating supplier table:

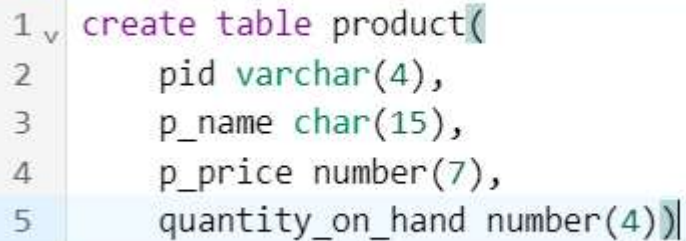
create table supplier(
 s_id varchar(5),
 s_name varchar(15),
 s_city varchar(15),
 s_phone number(10))

alter table supplier rename column s_name to SCompany_name

```
1 v create table supplier(  
2     s_id varchar(5),  
3     s_name varchar(15),  
4     s_city varchar(15),  
5     s_phone number(10));
```


3.creating product table:

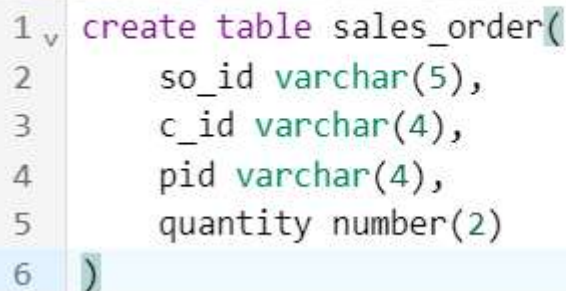
```
create table product(  
    pid varchar(4),  
    p_name char(15),  
    p_price number(7),  
    quantity_on_hand number(4))  
alter table product add primary key(pid)
```

A screenshot of a SQL code editor showing the creation of a 'product' table. The code is: 1 create table product(, 2 pid varchar(4), 3 p_name char(15), 4 p_price number(7), 5 quantity_on_hand number(4))|. The lines are numbered 1 to 5 on the left. The code is color-coded: 'create table' is purple, 'product(' is blue, 'pid varchar(4),' is green, 'p_name char(15),' is green, 'p_price number(7),' is green, and 'quantity_on_hand number(4))|' is green. The background has a patterned header bar.

```
1 v create table product(  
2     pid varchar(4),  
3     p_name char(15),  
4     p_price number(7),  
5     quantity_on_hand number(4))|
```

4.creating sales_order table:

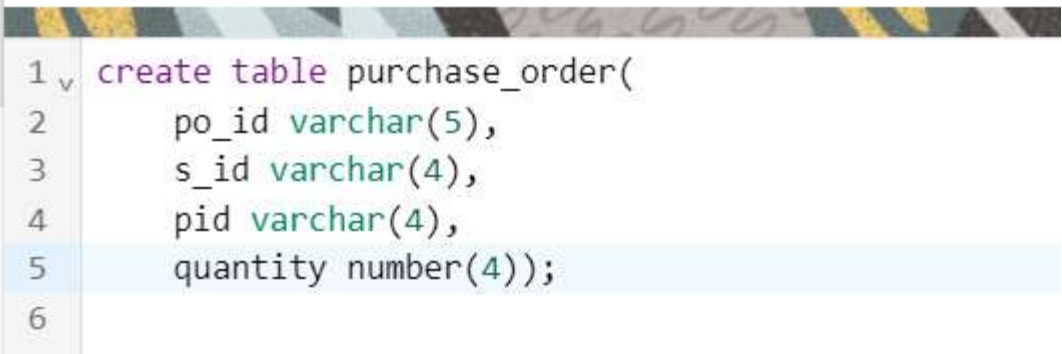
```
create table sales_order(  
    so_id varchar(5),  
    c_id varchar(4),  
    pid varchar(4),  
    quantity number(2)  
)  
alter table sales_order add foreign key(c_id) references customer  
alter table sales_order add foreign key(pid) references product  
ALTER TABLE sales_order ADD PRIMARY KEY(so_id)
```

A screenshot of a SQL code editor showing the creation of a 'sales_order' table. The code is: 1 create table sales_order(, 2 so_id varchar(5), 3 c_id varchar(4), 4 pid varchar(4), 5 quantity number(2), 6). The lines are numbered 1 to 6 on the left. The code is color-coded: 'create table' is purple, 'sales_order(' is blue, 'so_id varchar(5),' is green, 'c_id varchar(4),' is green, 'pid varchar(4),' is green, 'quantity number(2)' is green, and ')' is green. The background has a patterned header bar.

```
1 v create table sales_order(  
2     so_id varchar(5),  
3     c_id varchar(4),  
4     pid varchar(4),  
5     quantity number(2)  
6 )
```

5. Creating purchase_order table:

```
create table purchase_order(  
    po_id varchar(5),  
    s_id varchar(4),  
    pid varchar(4),  
    quantity number(4))  
alter table purchase_order add primary key(po_id)  
alter table purchase_order modify(s_id varchar(4) not null)  
alter table purchase_order modify(pid varchar(4) not null)  
alter table purchase_order modify(quantity number(4) not null)
```

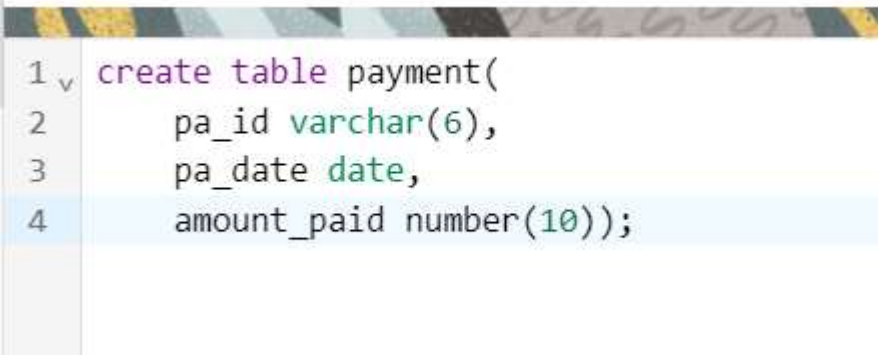
A screenshot of a SQL code editor showing the creation of the 'purchase_order' table. The code is as follows:

```
1 create table purchase_order(  
2     po_id varchar(5),  
3     s_id varchar(4),  
4     pid varchar(4),  
5     quantity number(4));  
6
```


The editor has a light blue background with a patterned header bar. Line numbers 1 through 6 are visible on the left. The code is color-coded: 'create table' is purple, 'purchase_order' is green, and the rest is black. The line containing 'quantity number(4));' is highlighted in light blue.

6. Creating payment table:

```
create table payment(  
    pa_id varchar(6),  
    pa_date date,  
    amount_paid number(10))  
alter table payment add primary key(pa_id)
```

A screenshot of a SQL code editor showing the creation of the 'payment' table. The code is as follows:

```
1 create table payment(  
2     pa_id varchar(6),  
3     pa_date date,  
4     amount_paid number(10));
```


The editor has a light blue background with a patterned header bar. Line numbers 1 through 4 are visible on the left. The code is color-coded: 'create table' is purple, 'payment' is green, and the rest is black. The line containing 'amount_paid number(10));' is highlighted in light blue.

7. Creating invoice_of_sales table:

```
create table invoice_of_sales(
```

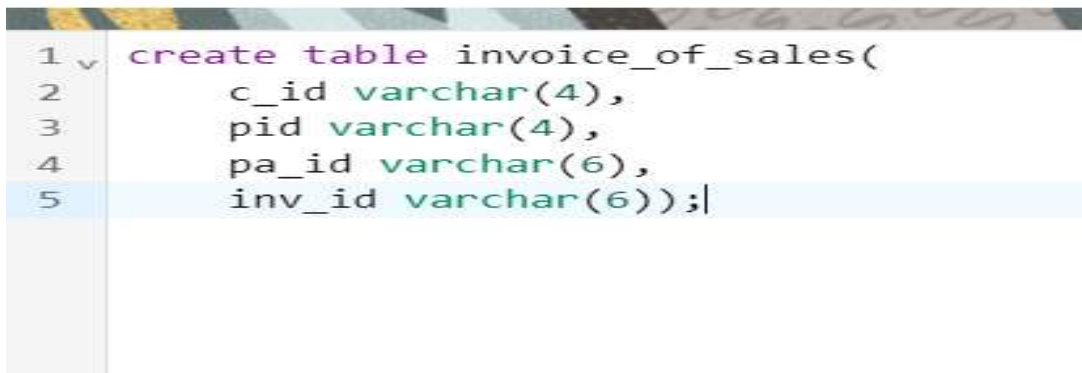
```
    c_id varchar(4),
```

```
    pid varchar(4),
```

```
    pa_id varchar(6),
```

```
    inv_id varchar(6))
```

```
alter table invoice_of _sales add primary key(inv_id)
```



```
1 v create table invoice_of_sales(  
2     c_id varchar(4),  
3     pid varchar(4),  
4     pa_id varchar(6),  
5     inv_id varchar(6));|
```

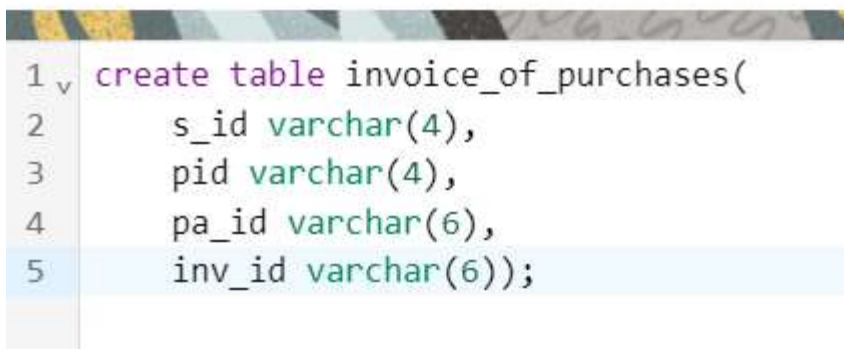
8. Creating invoices_of_purchases table:

```
create table invoice_of_purchases(  
    s_id varchar(4),  
    pid varchar(4),  
    pa_id varchar(6),  
    inv_id varchar(6))
```

```
alter table INVOICE_OF_PURCHASES add primary key(inv_id)
```

```
alter table INVOICE_OF_PURCHASES add foreign key(s_id) references supplier
```

```
alter table INVOICE_OF_PURCHASES add foreign key(pid) references product
```



```
1 v create table invoice_of_purchases(  
2     s_id varchar(4),  
3     pid varchar(4),  
4     pa_id varchar(6),  
5     inv_id varchar(6));
```

DML COMMANDS:

1.insert values into **customer**:

Query: insert into customer values('c_1','charan',6303125120,'Hyderabad')
insert into customer values('c_2','pranav',9869612530,'Mumbai')
insert into customer values('c_3','Nikhil',93239612540,'Hyderabad')
insert into customer values('c_4','sathwik',9992988486,'Warangal')
insert into customer values('c_5','Laxman',9987654321,'Hyderabad')

C_ID	C_NAME	C_PHONE	C_CITY
c_1	charan	6303125120	Hyderabad
c_2	pranav	9869612530	Mumbai
c_3	Nikhil	93239612540	Hyderabad
c_4	sathwik	9992988486	Warangal
c_5	Laxman	9987654321	Hyderabad

2.insert values into **Supplier**:Query:insert into supplier

values('S_1','Apple','Delhi',8000401977)
insert into supplier values('S_2','Samsung','Delhi',8089040657)
insert into supplier values('S_2','Dell','Mumbai',8089049457)

S_ID	SCOMPANY_NAME	S_CITY	S_PHONE
S_1	Apple	Delhi	8000401977
S_2	Dell	Mumbai	8089049457
s_3	Samsung	Banglore	8000987654
s_4	Sony	Hyderabad	9988770857

3.Insert into products:

```
insert into product values('A_14','iPhone_14 plus',149900,15)
```

```
insert into product values('S_14','Samsung_S23',124999,60)
```

```
insert into product values('DG15','Dell_G15_Laptop',107489,30)
```

```
insert into product values('SBTV','SonyBravia164cm',80000,100)
```

PID	P_NAME	P_PRICE	QUANTITY_ON_HAND
A_14	iPhone_14 plus	149900	15
S_14	Samsung_S23	124999	60
DG15	Dell_G15_Laptop	107489	30
SBTV	SonyBravia164cm	80000	100
Ss20	SamsungS20FE5G	80000	100

4.Insert into sales_order:

```
insert into sales_order values('SO_1','c_3','DG15',1)
```

```
insert into sales_order values('SO_2','c_1','S_14',1)
```

```
insert into sales_order values('SO_3','c_5','A_14',1)
```

```
insert into sales_order values('SO_4','c_5','DG15',1)
```

SO_ID	C_ID	PID	QUANTITY
SO_1	c_3	DG15	1
SO_2	c_1	S_14	1
SO_3	c_5	A_14	1
SO_4	c_5	DG15	1

5.insert into purchase_order:

```
insert into purchase_order values('po_1','S_1','A_14',50)
```

PO_ID	S_ID	PID	QUANTITY
po_1	S_1	A_14	50
po_2	S_2	DG15	20
po_3	S_3	S_14	10
po_4	S_3	Ss20	100

```
insert into
```

6.Insert to into payments:

```
insert into payment values('pa_1','22-APR-2023',7495000)
```

```
insert into payment values('pa_2','22-APR-2023',8000000)
```

```
insert into payment values('pa_3','22-APR-2023',1249990)
```

```
insert into payment values('pa_2','22-APR-2023',2149780)
```

```
insert into payment values('pa_5','28-APR-2023',107489)
```

```
insert into payment values('pa_6','30-APR-2023',124999)
```

```
insert into payment values('pa_7','01-MAY-2023',149900)
```

```
insert into payment values('pa_8','01-MAY-2023',107489)
```

PA_ID	PA_DATE	AMOUNT_PAID
pa_1	22-APR-23	7495000
pa_2	22-APR-23	2149780
pa_3	22-APR-23	1249990
pa_4	22-APR-23	80000000
pa_5	28-APR-23	107489
pa_6	30-APR-23	124999
pa_7	01-MAY-23	149900
pa_8	01-MAY-23	107489

7.Insert into invoice_of_sales:

```
insert into invoice_of_sales values('c_1','S_14','pa_6','inv_1')
```

```
insert into invoice_of_sales values('c_1','S_14','pa_6','inv_1')
```

C_ID	PID	PA_ID	INV_ID
c_1	S_14	pa_6	inv_1
c_3	DG15	pa_8	inv_2

8.Insert into invoice_of_purchases:

```
insert into invoice_of_purchases values('s_3','S_14','pa_2','inv_2')
```

```
insert into invoice_of_purchases values('s_4','SBTV','pa_4','inv_3')
```

```
insert into invoice_of_purchases values('S_1','A_14','pa_1','inv_1')
```

```
insert into invoice_of_purchases values('S_2','DG15','pa_2','inv_2')
```

PO_ID	S_ID	PID	QUANTITY
po_1	S_1	A_14	50
po_2	S_2	DG15	20
po_3	S_3	S_14	10
po_4	S_3	Ss20	100

