**Fundamental of Database (CMPS352)**

**Homework #2**

|  |  |
| --- | --- |
| **Student Name** |  |
| **ID Number** |  |
| **Total (100)** |  |

**Collect your answers and the output for each question to one file.**

* Submit a printed copy to you instructor before the deadline.
* Submit a softcopy online to Blackboard.

**Write the SQL statements for all the following questions.**

1. Create the following tables:

Customer

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| custNo | Number | 3 | PK |
| cname | Varchar2 | 25 | Unique |
| city | Varchar2 | 12 |  |

Item

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| ItemNo | Number | 3 | PK |
| UnitPrice | Number | 6,2 |  |

Orders

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| OrderNo | Number | 3 | PK |
| Odate | Date |  | NN |
| CustNo | Number | 3 | FK- Customer |
| Ord\_amt | Number | 5 |  |

Order\_Item

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| OrderNo | Number | 3 | PK |
| ItemNo | Number | 3 | PK |
| Qty | Number | 5 |  |

Shipment

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| OrderNo | Number | 3 | PK |
| WarehouseNo | Varchar2 | 3 | PK |
| Ship\_date | Date |  |  |

Warehouse

|  |  |  |  |
| --- | --- | --- | --- |
| Field name | Data type | size | Note |
| WarehouseNo | Varchar2 | 3 | PK |
| City | Varchar2 | 12 |  |

1. Fill the table by following data:

Customer

|  |  |  |
| --- | --- | --- |
| custNo | Cname | City |
| 11 | Sara | Doha |
| 22 | Fatma | Doha |
| 33 | Omar | Khor |
| 44 | Ali | Shimal |
| 55 | Hassan | Khor |

Orders

|  |  |  |  |
| --- | --- | --- | --- |
| OrderNo | Odate | CustNo | Ord\_amt |
| 21 | 03-Apr-02 | 11 | 10000 |
| 22 | 09-Mar-04 | 22 | 11000 |
| 23 | 23-Jan-01 | 33 | 14000 |
| 24 | 11-Aug-08 | 44 | 16000 |
| 25 | 06-Oct-10 | 55 | 20000 |

Item

|  |  |
| --- | --- |
| ItemNo | UnitPrice |
| 1 | 1100 |
| 2 | 1200 |
| 3 | 1300 |
| 4 | 1400 |
| 5 | 1500 |

Order\_Item

|  |  |  |
| --- | --- | --- |
| OrderNo | ItemNo | Qty |
| 21 | 1 | 20 |
| 25 | 5 | 30 |
| 22 | 2 | 40 |
| 24 | 4 | 10 |
| 23 | 3 | 60 |

Shipment

|  |  |  |
| --- | --- | --- |
| OrderNo | WarehouseNo | Ship\_date |
| 21 | W1 | 11-Jan-02 |
| 25 | W2 | 24-Feb-10 |
| 22 | W3 | 13-Jun-05 |
| 24 | W4 | 16-Sep-09 |
| 23 | W5 | 28-Apr-03 |

Warehouse

|  |  |
| --- | --- |
| WarehouseNo | City |
| W1 | Najma |
| W2 | Khor |
| W3 | Doha |
| W4 | Muntza |
| W5 | Rayaan |

1. Create view for all customers with their orders.
2. Create a query to display the orderNo and Ship\_date for all orders shipped from warehouseNo W2.
3. Create a query to display the warehouse information from which the customer named “Fatma” was supplied his orders. Produce a listing: orderNo, WarehouseNo,
4. Create a query to display the cname,No\_of\_orders, Avg\_order\_amt, where the middle column is the total number of orders and last column is the average order amount for that customer.
5. Create a query to display the orders that were not shipped within 30 days of ordering.
6. Create a query to display the orderNo for orders that were shipped from all warehouse that the company has in Rayaan.
7. Delete all orders for customer named "Sara".
8. List all items that have a price greater than the average price.
9. Find the item with the maximum unit price.
10. List all customer names whose orders were shipped from a warehouse in the same city as they live in.

Q1:

create table customer (custno number(3), cname varchar2(25), city varchar2(12), constraint customer\_custno\_pk primary key(custno), constraint customer\_cname\_uk unique(cname));

create table item (itemno number(3), unitprice number(6,2), constraint item\_itemno\_pk primary key(itemno));

create table orders (orderno number(3), odate date not null,custno number(3),ord\_amt number(5), constraint orders\_orderno\_pk primary key(orderno),constraint orders\_custno\_fk foreign key(custno) references customer(custno));

create table order\_item (orderno number(3),itemno number(3), qty number(5), constraint orders\_orderno\_itemno\_pk primary key(orderno,itemno));

create table warehouse (warehouseo varchar2(3) primary key, city varchar2(12));

create table shipment (orderno number(3), warehouseno number(3),ship\_date date, constraint shipment\_orderno\_whno\_pk primary key(orderno,warehouseno));

Q2:

insert into customer values(11,'SARA','DOHA');

insert into customer values(22,'FATMA','DOHA');

insert into customer values(33,'OMAR','KHOR');

insert into customer values(44,'ALI','SHIMAL');

insert into customer values(55,'HASSAN','KHOR');

insert into orders values(21,'03-APR-2002',11,10000);

insert into orders values(22,'09-MAR-2004',22,11000);

insert into orders values(23,'23-JAN-2001',33,14000);

insert into orders values(24,'11-AUG-2008',44,16000);

insert into orders values(25,'06-OCT-2010',55,20000);

insert into item values(1,1100);

insert into item values(2,1200);

insert into item values(3,1300);

insert into item values(4,1400);

insert into item values(5,1500);

insert into order\_item values(21,1,20);

insert into order\_item values(25,5,30);

insert into order\_item values(22,2,40);

insert into order\_item values(24,4,10);

insert into order\_item values(23,3,60);

insert into warehouse values('W2','KHOR');

insert into warehouse values('W1','NAJMA');

insert into warehouse values('W3','DOHA');

insert into warehouse values('W4','MUNTZA');

insert into warehouse values('W5','RAYAAN');

insert into shipment values(23,'W5','28-APR-2003');

insert into shipment values(24,'W4','16-SEP-2009');

insert into shipment values(22,'W3','13-JUN-2005');

insert into shipment values(25,'W2','24-FEB-2010');

insert into shipment values(21,'W1','11-JAN-2002');

Q3: create view cust\_view as select c.custno,c.cname,c.city,o.orderno,o.odate,o.ord\_amt from customer c, orders o where c.custno=o.custno;

Q4: select orderno,ship\_date from shipment where warehouseno='W2';

ORDERNO SHIP\_DATE

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25 24-FEB-10

Q5: select s.orderno,s.warehouseno from customer c,orders o,shipment s where c.cname='FATMA'and c.custno=o.custno and s.orderno=o.orderno;

ORDERNO WAR

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22 W3

Q6: select c.cname,count(o.orderno),avg(o.ord\_amt) from customer c, orders o where c.custno=o.custno group by c.cname;

CNAME COUNT(O.ORDERNO) AVG(O.ORD\_AMT)

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HASSAN 1 20000

SARA 1 10000

ALI 1 16000

FATMA 1 11000

OMAR 1 14000

Q7:

select o.orderno from orders o,shipment s where o.orderno=s.orderno and s.ship\_date-o.odate>30;

ORDERNO

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23

24

22

Q8: select s.orderno from shipment s,warehouse w where s.warehouseno=w.warehouseo and w.city='RAYAAN';

ORDERNO

----------

23

Q9: delete orders where orders.custno in (select customer.custno from orders,customer where customer.cname='SARA');

1 row deleted.

Q10: select itemno from item where unitprice>(select avg(unitprice) from item);

ITEMNO

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4

5

Q11: select itemno from item where unitprice = (select max(unitprice) from item);

ITEMNO

----------

5

Q12: select distinct c.cname from customer c,orders o,shipment s, warehouse w where c.custno=o.custno and o.orderno=s.orderno and w.warehouseo=s.warehouseno and c.city=w.city;

CNAME

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HASSAN

FATMA