**ASSIGNMENT:4**

**Write SQL expression for following examples.**

**Customer:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** | **CITY** | **COUNTRY** | **PHONE** |
| 102 | Nishant | Kumar | Mumbai | India | 9865352501 |
| 103 | Parth | Vijay | Jaipur | India | 9685741425 |
| 104 | Nikhil | prakash | ranchi | India | 9767344577 |
| 105 | Roshan | patil | jalgaon | India | 9764440536 |
| 101 | Chetan | Pawar | Pune | India | 9767340536 |

**OrderItem:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **ORDERID** | **PRODUCTID** | **UNITPRICE** | **QUANTITY** |
| 102 | 202 | 302 | 200 | 120 |
| 103 | 203 | 303 | 300 | 1 |
| 104 | 204 | 304 | 320 | 250 |
| 101 | 201 | 301 | 100 | 50 |
| 105 | 205 | 305 | 600 | 400 |

**Orders:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ORDERID** | **ORDERDATE** | **TOTALORDERS** | **CUSTOMERID** | **TOTALAMOUNT** |
| 201 | 12/05/2016 | 401 | 101 | 25000 |
| 202 | 06/06/2017 | 402 | 102 | 1200 |
| 203 | 08/07/2017 | 403 | 103 | 10000 |
| 204 | 01/04/2017 | 404 | 104 | 3600 |

**Product:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **PRODUCTNAME** | **SUPPLIERID** | **UNITPRICE** | **PACKAGE** | **ISDISCONTINUED** |
| 101 | C | 601 | 100 | 250 | No |
| 102 | C++ | 602 | 200 | 500 | No |
| 103 | Java | 603 | 300 | 120 | No |
| 104 | Python | 604 | 320 | 600 | no |
| 105 | HTML | 605 | 600 | 250 | No |

**Supplier:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SUPPLIERID** | **COMPANYNAME** | **CONTACTNAME** | **CITY** | **COUNTRY** | **PHONE** | **FAX** |
| 603 | Cloudtail | Cloud | Delhi | India | 9767840536 | 146789 |
| 604 | SoldBook | SB | Newyork | USA | 9767340500 | 124578 |
| 605 | Kindle | Kind | Kolkata | India | 9767000536 | 986532 |
| 601 | codex | code | Pune | India | 9767376898 | 123345 |
| 602 | Sample | Samp | Mumbai | India | 9754340536 | 587455 |

**1.Problem: List products with order quantities greater than 100.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **ORDERITEM** | | Id | | OrderId | | ProductId | | UnitPrice | | Quantity | | |  | | --- | | **PRODUCT** | | Id | | ProductName | | SupplierId | | UnitPrice | | Package | | IsDiscontinued | |

**Query:**

select p.productname,oi.quantity

from product p join orderitem oi

using(id)

where quantity>100;

**Output:**

|  |  |
| --- | --- |
| **PRODUCTNAME** | **QUANTITY** |
| C++ | 120 |
| Python | 250 |
| HTML | 400 |
|  |  |

**2.Problem: List all customers with their total number of orders**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **CUSTOMER** | | Id | | FirstName | | LastName | | City | | Country | | Phone | | |  | | --- | | **ORDER** | | Id | | OrderDate | | Totalorders | | CustomerId | | TotalAmount | |

**Query:**

select customerid,FirstName,Lastname,Totalorders

from customer,orders

where customer.id=orders.customerid

**Output:**

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTOMERID** | **FIRSTNAME** | **LASTNAME** | **TOTALORDERS** |
| 101 | Chetan | Pawar | 401 |
| 102 | Nishant | Kumar | 402 |
| 103 | Parth | Vijay | 403 |
| 104 | Nikhil | prakash | 404 |
| 105 | Roshan | patil | 405 |

**3.Problem: Which products were sold by the unit (i.e. quantity = 1)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **PRODUCT** | | Id | | ProductName | | SupplierId | | UnitPrice | | Package | | IsDiscontinued | | |  | | --- | | **ORDERITEM** | | Id | | OrderId | | ProductId | | UnitPrice | | Quantity | |

**Query:**

Select p.productname,oi.Quantity

from product p join orderitem oi

using(id)

where quantity=1;

**Output:**

|  |  |
| --- | --- |
| **PRODUCTNAME** | **QUANTITY** |
| Java | 1 |

**4..Problem: List customers who placed orders that are larger than the average of each customer order**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **CUSTOMER** | | Id | | FirstName | | LastName | | City | | Country | | Phone | | |  | | --- | | **ORDER** | | Id | | OrderDate | | Totalorders | | CustomerId | | TotalAmount | |

**Query:**

select id,firstname,lastname,AVG(totalorders)

from customer,orders

where customer.id=orders.customerid

group by (customer.id,customer.firstname,customer.lastname)

**Output:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** | **AVG(TOTALORDERS)** |
| 103 | Parth | Vijay | 403 |
| 101 | Chetan | Pawar | 401 |
| 102 | Nishant | Kumar | 402 |
| 104 | Nikhil | prakash | 404 |

## The SQL EXISTS syntax

The general syntax is:

SELECT column-names

FROM table-name

WHERE EXISTS

(SELECT column-name

FROM table-name

WHERE condition)

**5.Problem Find suppliers with products over $100.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | 1. **SUPPLIER** | | Id | | CompanyName | | ContactName | | City | | Country | | Phone | | Fax | | |  | | --- | | **PRODUCT** | | Id | | ProductName | | SupplierId | | UnitPrice | | Package | | IsDiscontinued | |

**Query:**

Select supplierid,CompanyName,ProductName,unitPrice

from supplier,product

where supplier.id=product.supplierid

and unitprice>100;

**Output:**

|  |  |  |  |
| --- | --- | --- | --- |
| **SUPPLIERID** | **COMPANYNAME** | **PRODUCTNAME** | **UNITPRICE** |
| 603 | Cloudtail | Java | 300 |
| 604 | SoldBook | Python | 320 |
| 605 | Kindle | HTML | 600 |
| 602 | Sample | C++ | 200 |

**The SQL SELECT INTO syntax**

## The general syntax is:

1. SELECT column-names
2. INTO new-table-name
3. FROM table-name
4. WHERE EXISTS
5. (SELECT column-name
6. FROM table-name
7. WHERE condition)

**6. Problem: Copy all suppliers from INDIA to a new SupplierINDIA table.**

|  |
| --- |
| **SUPPLIER** |
| Id |
| CompanyName |
| ContactName |
| City |
| Country |
| Phone |
| Fax |

**Query:**

create table supplierINDIA as

( select \* from supplier

where country='India');

**Output:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ID** | **COMPANYNAME** | **CONTACTNAME** | **CITY** | **COUNTRY** | **PHONE** | **FAX** |
| 603 | Cloudtail | Cloud | Delhi | India | 9767840536 | 146789 |
| 605 | Kindle | Kind | Kolkata | India | 9767000536 | 986532 |
| 601 | codex | code | Pune | India | 9767376898 | 123345 |
| 602 | Sample | Samp | Mumbai | India | 9754340536 | 587455 |

**7.Problem: List all orders with customer information**

|  |
| --- |
| **CUSTOMER** |
| Id |
| FirstName |
| LastName |
| City |
| Country |
| Phone |

|  |
| --- |
| **ORDER** |
| Id |
| OrderDate |
| Totalorders |
| CustomerId |
| TotalAmount |

**Query:**

Select CustomerId,FirstName,LastName,City,Country,Phone,OrderDate,Totalorders,TotalAmount

from customer,orders

where customer.id=orders.customerid;

**Output:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CUSTOMERID** | **FIRSTNAME** | **LASTNAME** | **CITY** | **COUNTRY** | **PHONE** | **ORDERDATE** | **TOTALORDERS** | **TOTALAMOUNT** |
| 101 | Chetan | Pawar | Pune | India | 9767340536 | 12/05/2016 | 401 | 25000 |
| 102 | Nishant | Kumar | Mumbai | India | 9865352501 | 06/06/2017 | 402 | 1200 |
| 103 | Parth | Vijay | Jaipur | India | 9685741425 | 08/07/2017 | 403 | 10000 |
| 104 | Nikhil | prakash | ranchi | India | 9767344577 | 01/04/2017 | 404 | 3600 |
| 105 | Roshan | patil | jalgaon | India | 9764440536 | 06/02/2017 | 405 | 25000 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **ORDER** | | Id | | OrderDate | | Totalorders | | CustomerId | | TotalAmount | | |  | | --- | | **PRODUCT** | | Id | | ProductName | | SupplierId | | UnitPrice | | Package | | IsDiscontinued | | |  | | --- | | **ORDERITEM** | | Id | | OrderId | | ProductId | | UnitPrice | | Quantity | |

**8.Problem: List all orders with product names, quantities, and prices**

**Query:**

select orderid,productname,quantity,totalamount

from orderitem oi

join orders o

on oi.orderid=o.id

join product p

on oi.id=p.id;

**Output:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ORDERID** | **PRODUCTNAME** | **QUANTITY** | **TOTALAMOUNT** |
| 201 | C | 50 | 25000 |
| 202 | C++ | 120 | 1200 |
| 203 | Java | 1 | 10000 |
| 204 | Python | 250 | 3600 |
| 205 | HTML | 400 | 25000 |

**9. Problem: List customers that have not placed orders**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  | | --- | | **ORDER** | | Id | | OrderDate | | Totalorders | | CustomerId | | TotalAmount | | |  | | --- | | **CUSTOMER** | | Id | | FirstName | | LastName | | City | | Country | | Phone | |

**Query:**

select id,firstname,lastname

from customer c

where not exists

(select customerid

from orders o

where c.id=o.customerid);

**Output:**

|  |  |  |
| --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** |
| 105 | Roshan | patil |

**10. Problem: Match all customers and suppliers by country**

|  |
| --- |
| 1. **SUPPLIER** |
| Id |
| CompanyName |
| ContactName |
| City |
| Country |
| Phone |
| Fax |

|  |
| --- |
| **CUSTOMER** |
| Id |
| FirstName |
| LastName |
| City |
| Country |
| Phone |

**Query:**

**Customer:**

SELECT Id,FirstName,LastName,City,Country,Phone

FROM customer

WHERE Country IN

(SELECT Country

FROM supplier

group by(country));

**Supplier:**

SELECT Supplierid,CompanyName,ContactName,City,Country,Phone,Fax

FROM supplier

WHERE Country IN

(SELECT Country

FROM supplier

group by(country));

**Output:**

**Customer:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** | **CITY** | **COUNTRY** | **PHONE** |
| 102 | Nishant | Kumar | Mumbai | India | 9865352501 |
| 103 | Parth | Vijay | Jaipur | India | 9685741425 |
| 104 | Nikhil | prakash | ranchi | India | 9767344577 |
| 105 | Roshan | patil | jalgaon | India | 9764440536 |
| 101 | Chetan | Pawar | Pune | India | 9767340536 |

**Supplier:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SUPPLIERID** | **COMPANYNAME** | **CONTACTNAME** | **CITY** | **COUNTRY** | **PHONE** | **FAX** |
| 602 | Sample | Samp | Mumbai | India | 9754340536 | 587455 |
| 601 | codex | code | Pune | India | 9767376898 | 123345 |
| 605 | Kindle | Kind | Kolkata | India | 9767000536 | 986532 |
| 603 | Cloudtail | Cloud | Delhi | India | 9767840536 | 146789 |
| 604 | SoldBook | SB | Newyork | USA | 9767340500 | 124578 |

**11.Problem: Match customers that are from the same city and country**

|  |
| --- |
| **CUSTOMER** |
| Id |
| FirstName |
| LastName |
| City |
| Country |
| Phone |

**Query:**

SELECT Id,FirstName,LastName,City,Country,Phone

FROM customer

WHERE Country IN

(SELECT Country

FROM customer

group by(city,country));

**Output:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** | **CITY** | **COUNTRY** | **PHONE** |
| 102 | Nishant | Kumar | Mumbai | India | 9865352501 |
| 103 | Parth | Vijay | Jaipur | India | 9685741425 |
| 104 | Nikhil | prakash | ranchi | India | 9767344577 |
| 105 | Roshan | patil | jalgaon | India | 9764440536 |
| 101 | Chetan | Pawar | Pune | India | 9767340536 |

**12.Problem :Create view “Customer\_order” to store details of customer and order combine.**

**Query:**

create or replace view Customer\_order

(Id,FirstName,LastName,City,Country,Phone,OrderId,OrderDate,Totalorders,TotalAmount) AS

select c.id,c.firstname,c.lastname,c.city,c.country,c.phone,o.OrderId,o.OrderDate,o.Totalorders,o.TotalAmount

from customer c left outer join orders o

on (c.id=o.customerid);

**Output:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ID** | **FIRSTNAME** | **LASTNAME** | **CITY** | **COUNTRY** | **PHONE** | **ORDERID** | **ORDERDATE** | **TOTALORDERS** | **TOTALAMOUNT** |
| 101 | Chetan | Pawar | Pune | India | 9767340536 | 201 | 12/05/2016 | 401 | 25000 |
| 102 | Nishant | Kumar | Mumbai | India | 9865352501 | 202 | 06/06/2017 | 402 | 1200 |
| 103 | Parth | Vijay | Jaipur | India | 9685741425 | 203 | 08/07/2017 | 403 | 10000 |
| 104 | Nikhil | prakash | ranchi | India | 9767344577 | 204 | 01/04/2017 | 404 | 3600 |
| 105 | Roshan | patil | jalgaon | India | 9764440536 | - | - | - | - |