**DATABASE SCHEMA FOR A CUSTOMER-SALE SCENARIO**

Customer(**Cust\_id:integer**,cust\_name:string)

Item(**item\_id:integer**,item\_name:string,price:integer)

Sale(**bill\_no:integer**,bill\_date:date,cust\_id:integer,item\_id:integer,qty\_sold:integer)

For the above schema,perform the following:-

**a).**create the tables with the appropriate integrity constraint insert around 10 records in each of the tables.

**Create the table for customer17:**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

*create table customer17 (custid number(5)primary key,custname varchar2(15));*

*Table created.*

*0.22 seconds*

**Describe the table:**

*desc customer17;*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [Object Type](javascript:popupFieldHelp('22156222310565561','4017082961750210','Close')) | **TABLE** | [Object](javascript:popupFieldHelp('22174606305655533','4017082961750210','Close')) | **CUSTOMER17** |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table** | **Column** | **Data Type** | **Length** | **Precision** | **Scale** | **Primary Key** | **Nullable** | **Default** | **Comment** |
| [CUSTOMER18](javascript:ret_Column('CSEA17.CUSTOMER18');) | [CUSTID](javascript:ret_Column('CUSTID');) | Number | - | 5 | 0 | 1 | - | - | - |
|  | [CUSTNAME](javascript:ret_Column('CUSTNAME');) | Varchar2 | 15 | - | - | - | nullable | - | - |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | 1 - 2 |  |  | | | | | | | | | | |
|  | | | | | | | | | |
|  |  |  |  |

**Create a table for item17:**

*create table item17 (itemid number(4) primary key,itemname varchar2(15),price number(6,2));*

**Describe a table:**

*desc item17;*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [Object Type](javascript:popupFieldHelp('22156222310565561','4017082961750210','Close')) | **TABLE** | [Object](javascript:popupFieldHelp('22174606305655533','4017082961750210','Close')) | **ITEM17** |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table** | **Column** | **Data Type** | **Length** | **Precision** | **Scale** | **Primary Key** | **Nullable** | **Default** | **Comment** |
| [ITEM17](javascript:ret_Column('CSEA17.ITEM17');) | [ITEMID](javascript:ret_Column('ITEMID');) | Number | - | 4 | 0 | 1 | - | - | - |
|  | [ITEMNAME](javascript:ret_Column('ITEMNAME');) | Varchar2 | 15 | - | - | - | nullable | - | - |
|  | [PRICE](javascript:ret_Column('PRICE');) | Number | - | 6 | 2 | - | nullable | - | - |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | 1 - 3 |  |  | | | | | | | | | | |
|  |  |  |  |

**Create the table for sale17:**

*create table sale17 (billno number(5) primary key, billdate date, custid number(5) references customer17(custid),itemid number(4) references item17(itemid),qty number(4));*

**Describe the table:**

*desc sale17;*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | [Object Type](javascript:popupFieldHelp('22156222310565561','4017082961750210','Close')) | **TABLE** | [Object](javascript:popupFieldHelp('22174606305655533','4017082961750210','Close')) | **SALE17** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Table** | **Column** | **Data Type** | **Length** | **Precision** | **Scale** | **Primary Key** | **Nullable** | **Default** | **Comment** | | [SALE17](javascript:ret_Column('CSEA17.SALE17');) | [BILLNO](javascript:ret_Column('BILLNO');) | Number | - | 5 | 0 | 1 | - | - | - | |  | [BILLDATE](javascript:ret_Column('BILLDATE');) | Date | 7 | - | - | - | nullable | - | - | |  | [CUSTID](javascript:ret_Column('CUSTID');) | Number | - | 5 | 0 | - | nullable | - | - | |  | [ITEMID](javascript:ret_Column('ITEMID');) | Number | - | 4 | 0 | - | nullable | - | - | |  | [QTY](javascript:ret_Column('QTY');) | Number | - | 4 | 0 | - | nullable | - | - | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  | 1 - 5 |  |  | | | | | | | | | | | |  |  |  |  | |

**Insert a record into customer17:**

*insert into customer17 values(1001,'ajay');*

*1 row(s) inserted.*

*insert into customer17 values(1002,'karthika');*

*1 row(s) inserted.*

*insert into customer17 values(1003,'brindha');*

*1 row(s) inserted.*

*insert into customer17 values(1004,'vinoth');*

*1 row(s) inserted.*

*insert into customer17 values(1005,'gayu');*

*1 row(s) inserted.*

**View :**

*select \* from customer17;*

|  |  |  |
| --- | --- | --- |
| **CUSTID** | | **CUSTNAME** |
| 1001 | | ajay |
| 1002 | | karthika |
| 1003 | | brindha |
| 1004 | | vinoth |
| 1005 | | gayu |
| 5 rows returned in 0.02 seconds | |  | [CSV Export](http://127.0.0.1:8080/apex/f?p=4500:1204:4017082961750210::::P1204_BROWSER_LANG:en-us) |
|  | |  |  |

**Insert a record into item17:**

*insert into item17 values(11,'pencil',25);*

*1 row(s) inserted.*

*insert into item17 values(12,'pen',30);*

*1 row(s) inserted.*

*insert into item17 values(13,'eraser',10);*

*1 row(s) inserted.*

*insert into item17 values(14,'note',50);*

*1 row(s) inserted.*

*insert into item17 values(15,'book',60);*

*1 row(s) inserted.*

**View:**

*select \* from item17;*

|  |  |  |
| --- | --- | --- |
| **ITEMID** | | **ITEMNAME** |
| 11 | | pencil |
| 12 | | pen |
| 13 | | eraser |
| 14 | | note |
| 15 | | book |
| 5 rows returned in 0.00 seconds | |

**Insert a record into sale17:**

*insert into sale17 values(1,'08-jan-2019',1001,11,3);*

*1 row(s) inserted.*

*insert into sale17 values(2,'08-jan-2019',1002,12,4);*

*1 row(s) inserted.*

*insert into sale17 values(3,'08-jan-2019',1003,15,10);*

*1 row(s) inserted.*

*insert into sale17 values(4,'08-jan-2019',1003,14,1);*

*1 row(s) inserted.*

**View :**

*select \* from sale17;*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BILLNO** | | **BILLDATE** | **CUSTID** | | **ITEMID** | **QTY** |
| 1 | | 08-JAN-19 | 1001 | | 11 | 3 |
| 2 | | 08-JAN-19 | 1002 | | 12 | 4 |
| 3 | | 08-JAN-19 | 1003 | | 15 | 10 |
| 4 | | 08-JAN-19 | 1003 | | 14 | 1 |
| 4 rows returned in 0.02 seconds | | |

**Insert a record in another way:**

*insert into sale17 values(:bn,:dt,:c,:i,:q);*

1 row(s) inserted.

|  |  |
| --- | --- |
| :BN |  |
| :DT |  |
| :C |  |
| :I |  |
| :Q |  |

**b).** list all bills for the current date with the customer names and item numbers.

***1).*** *select c.custname,i.itemid,s.billno from customer17 c,item17 i,sale17 s where c.custid=s.custid and s.billdate=****to\_char(sysdate)****;*

**Output:**

no data found

***2).*** *select c.custname,i.itemid,s.billno from customer17 c,item17 i,sale17 s where c.custid=s.custid and s.billdate=****'08-jan-2019'****;*

**Output:**

|  |  |  |
| --- | --- | --- |
| **CUSTNAME** | **ITEMID** | **BILLNO** |
| ajay | 11 | 1 |
| ajay | 12 | 1 |
| ajay | 13 | 1 |
| ajay | 14 | 1 |
| ajay | 15 | 1 |
| karthika | 11 | 2 |
| karthika | 12 | 2 |
| karthika | 13 | 2 |
| karthika | 14 | 2 |
| karthika | 15 | 2 |
| More than 10 rows available. Increase rows selector to view more rows. | | |
| 10 rows returned in 0.01 seconds |  | [CSV](http://127.0.0.1:8080/apex/f?p=4500:1204:4017082961750210::::P1204_BROWSER_LANG:en-us) |

***3).*** *select c.custname,i.itemid,s.billno from customer17 c,item17 i,sale17 s where c.custid=s.custid and i.itemid=s.itemid and s.billdate='08-jan-2019';*

**Output:**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **CUSTNAME** | | **ITEMID** | **BILLNO** |
| ajay | | 11 | 1 |
| karthika | | 12 | 2 |
| brindha | | 15 | 3 |
| brindha | | 14 | 4 |
| gayu | | 12 | 5 |
| 5 rows returned in 0.00 seconds | |  |

**C).** list the total bill details with the quantity sold , price of the item and the final amount

*select i.price,s.qty,(i.price\*s.qty) total from item17 i,sale17 s where i.itemid=s.itemid;*

**Output:**

|  |  |  |
| --- | --- | --- |
| **PRICE** | **QTY** | **TOTAL** |
| 25 | 3 | 75 |
| 30 | 4 | 120 |
| 60 | 10 | 600 |
| 50 | 1 | 50 |
| 30 | 5 | 150 |

**d).** list the details of the customer who have bought a product which has a price>20.

*select c.custid,c.custname from customer17 c,sale17 s,item17 i where i.price>20 and c.custid=s.custid and i.itemid=s.itemid;*

**Output:**

|  |  |  |
| --- | --- | --- |
| **CUSTID** | | **CUSTNAME** |
| 1001 | | ajay |
| 1002 | | karthika |
| 1003 | | brindha |
| 1003 | | brindha |
| 1005 | | gayu |
| 5 rows returned in 0.00 seconds | |

**e).** Give a count of how many products have been bought by each customer.

select custid,count(itemid) from sale17 group by custid;

**Output:**

|  |  |
| --- | --- |
| **CUSTID** | **COUNT(ITEMID)** |
| 1003 | 2 |
| 1001 | 1 |
| 1002 | 1 |
| 1005 | 1 |

**f).** Give a list of products bought by a customer having cust\_id as 5.

select i.itemname from item17 i,sale17 s where i.itemid=s.itemid and custid=1005;

**Output:**

|  |
| --- |
| **ITEMNAME** |
| pen |

**g).** list the item details which are sold as of today.

*select i.itemname from item17 i, sale17 s where i.itemid=s.itemid and s.billdate='08-jan-2019';*

**output:**

|  |
| --- |
| **ITEMNAME** |
| pencil |
| pen |
| book |
| note |
| Pen |

**Displaying only distinct itemname:**

*select distinct i.itemname from item17 i, sale17 s where i.itemid=s.itemid and s.billdate='08-jan-2019';*

**Output:**

|  |
| --- |
| **ITEMNAME** |
| note |
| book |
| pencil |
| pen |
| 4 rows returned in 0.00 seconds |