Lap 4

Create database ‘Product Management’ as follows:

**Table: Customer**

**Name Type Size**

CustomerID varchar 5

Cus\_Name Nvarchar 30

Address Nvarchar 50

Phone varchar 10

Email varchar 30

Integrity constraints : Cus\_Name is not NULL and Phone have to 10 numbers

**Table: Product**

**Name Type Size**

ProductID varchar 5

ProductName Nvarchar 30

Unit Nvarchar 20

Prices Number 20

Quantity Number 20

Integrity constraints: ProductName is not NULL, prices >0 and Quantity>=0

**Table: Invoice**

**Name Type Size**

InvoiceID Nvarchar 10

Date\_Invoice Date/Time

CustomerID Nvarchar 5

Total\_Value Number 20

Integrity constraints: Date\_Invoice have to greater current date

**Table: Invoice\_Detail**

**Name Type Size**

InvoiceID Nvarchar 10

ProductID Nvarchar 5

Quantityofsell Number 20

Price Number 20

Promotion Number 20

Integrity constraints: Quantityofsell >0, Price >0

**Customer**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CustomerID | Cus\_Name | Address | Phone | Email |
| KH01 | Nguyễn Thị Bé | Tân Bình | 8457895 | bnt@yahoo.com |
| KH02 | Lê Hoàng Nam | Bình Chánh | 9878987 | namlehoang @abc.com.vn |
| KH03 | Trần Thị Chiêu | Tân Bình | 8457895 | null |
| KH04 | Mai Thị Quế Anh | Bình Chánh | null | null |
| KH05 | Lê Văn Sáng | Quận 10 | null | sanglv@hcm.vnn.vn |
| KH06 | Trần Hoàng | Tân Bình | 8457897 | null |

**Product**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ProductID | ProductName | Unit | Prices | Quantity |
| VT01 | Xi măng | Bao | 50000 | 5000 |
| VT02 | Cát | Khối | 45000 | 50000 |
| VT03 | Gạch ống | Viên | 120 | 800000 |
| VT04 | Gạch thẻ | Viên | 110 | 800000 |
| VT05 | Đá lớn | Khối | 25000 | 100000 |
| VT06 | Đá nhỏ | Khối | 33000 | 100000 |
| VT07 | Lam gió | Cái | 15000 | 50000 |

**Invoice**

|  |  |  |  |
| --- | --- | --- | --- |
| InvoiceID | Date\_Invoice | CustomerID | Total\_Value |
| HD001 | 12/05/2019 | KH01 | null |
| HD002 | 25/05/2019 | KH02 | null |
| HD003 | 25/05/2019 | KH01 | null |
| HD004 | 25/05/2019 | KH04 | null |
| HD005 | 26/05/2019 | KH04 | null |
| HD006 | 02/06/2019 | KH03 | null |
| HD007 | 22/06/2019 | KH04 | null |
| HD008 | 25/06/2019 | KH03 | null |
| HD009 | 15/08/2019 | KH04 | null |
| HD010 | 30/09/2019 | KH01 | null |
| HD011 | 27/12/2019 | KH06 | null |
| HD012 | 27/12/2019 | KH01 | null |

**Invoice\_Detail**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| InvoiceID | ProductID | QuantityofSell | Price | Promotion |
| HD001 | VT01 | 5 | 52000 | null |
| HD001 | VT05 | 10 | 30000 | null |
| HD002 | VT03 | 10000 | 150 | null |
| HD003 | VT02 | 20 | 55000 | null |
| HD004 | VT03 | 50000 | 150 | null |
| HD004 | VT04 | 20000 | 120 | null |
| HD005 | VT05 | 10 | 30000 | null |
| HD005 | VT06 | 15 | 35000 | null |
| HD005 | VT07 | 20 | 17000 | null |
| HD006 | VT04 | 10000 | 120 | null |
| HD007 | VT04 | 20000 | 125 | null |
| HD008 | VT01 | 100 | 55000 | null |
| HD008 | VT02 | 20 | 47000 | null |
| HD009 | VT02 | 25 | 48000 | null |
| HD010 | VT01 | 25 | 57000 | null |
| HD011 | VT01 | 20 | 55000 | null |
| HD011 | VT02 | 20 | 45000 | null |
| HD012 | VT01 | 20 | 55000 | null |
| HD012 | VT02 | 10 | 48000 | null |
| HD012 | VT03 | 10000 | 150 | null |

1. Write An SQL Query to display the list of customers whose address is "Tân Bình"
2. Write An SQL Query to display the list of customers who do not have a phone number.
3. Write An SQL Query to display the list of products with the unit is "Cái".
4. Write An SQL Query to displays the list of products including: product code, product name, unit and prices for which the prices is above 25,000.
5. Write An SQL Query to display the list of products which has product name is "Gạch" (including types of Gạch).
6. Write An SQL Query to update the promotion column of table Invoice detail as follows: If the quantityofsell >50 then promotion is 0, If the quantityofsell >=50 and quantityofsell<100 then promotion is 10% (quantityofsell \*price\*0,1) else promotion is 20%.
7. Write An SQL Query to update the column Total\_value of the table Invoice.
8. Write An SQL Query to displays a list of products which has the price range of 20000 to 40000.
9. Write An SQL Query to display the information including: Invoice code, customer name and customer address on 25/5/2019.
10. Write An SQL Query to display Invoice code, invoice date, customer name of invoices in June 2019.
11. Write An SQL Query to display a list of customers who did not buy product in June 2010. The Information include: customer name, address, phone number.
12. Write An SQL Query to display invoice details including: invoiceID, productID, name of product, unit, price, quantity of sell, purchase value (prices \* quantity), sale value (price \* quantityofsell).
13. Write An SQL Query to display all the information of unsold products.
14. Write An SQL Query to display the statistics table of the first quarter of 2019 with including the following information: The number of invoice, purchase value, sale value, profit (sales value - purchase value).
15. Write An SQL Query to display the invoices has the largest total values, the information includes: Invoice code, invoice date, customer name and total value of the invoice.
16. Write An SQL Query to display the customer code, customer name and the number of invoice that customer has.
17. Write An SQL Query to display information about products that are sold in the most invoices.
18. Write An SQL Query to show a list of all customers including: Customer code, customer name and the number of invoice (if the customer has not yet buying anything, the column of invoice number is null).