**Date : Sep 19,2022**

**Student Id : c0874203**

**Student Name: Pennapar Supawatrai (Alice)**

**READ THE INSTRUCTION CAREFULLY**

You need to create a database having two tables according to the diagram shown below and then answer the following questions:

mysql -u root -p

CREATE DATABASE \_\_\_;

USE \_\_\_;

Show tables;

Desc tablename;

A screenshot of a cell phone

Description automatically generated

**CREATE TABLE name**

(Colname datatype PRIMARY KEY,

Colname2 datatype UNIQUE,

Colname3 datatype NOT NULL,

FOREIGN KEY (colname3) REFERENCES table2(colname) ON DELETE CASCADE ON CASCADE UPDATE);

create table Manufacturers (Code integer PRIMARY KEY, Name text);

create table Products (Code integer primary key, Name text, Price real,

Manufacturer integer, foreign key (Manufacturer) references Manufacturers(Code)

ON DELETE CASCADE on update cascade)

Product Table

|  |  |  |  |
| --- | --- | --- | --- |
| code | Name | Price | Manufacturer |
| 1 | ‘hard drive’ | 240 | 5 |
| 2 | ‘memory’ | 120 | 6 |
| 3 | ‘zip drive’ | 150 | 4 |
| 4 | ‘floppy disk’ | 5 | 6 |
| 5 | ‘monitor’ | 240 | 1 |
| 6 | ‘DVD drive’ | 180 | 2 |
| 7 | ‘CD drive’ | 90 | 2 |
| 8 | ‘printer | 270 | 3 |
| 9 | ‘toner cartridge’ | 66 | 3 |
| 10 | ‘DVD burner’ | 180 | 2 |

Manufacturer Table

|  |  |
| --- | --- |
| Code | Name |
| 1 | ‘Sony’ |
| 2 | ‘Creative Labs’ |
| 3 | 'Hewlett-Packard' |
| 4 | 'Iomega' |
| 5 | 'Fujitsu' |
| 6 | 'Winchester' |

Here are the insert statements you can copy/paste in your shell to facilitate your work:

INSERT INTO Manufacturers(Code,Name) VALUES(1,'Sony');

INSERT INTO Manufacturers(Code,Name) VALUES(2,'Creative Labs');

INSERT INTO Manufacturers(Code,Name) VALUES(3,'Hewlett-Packard');

INSERT INTO Manufacturers(Code,Name) VALUES(4,'Iomega');

INSERT INTO Manufacturers(Code,Name) VALUES(5,'Fujitsu');

INSERT INTO Manufacturers(Code,Name) VALUES(6,'Winchester');

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(1,'Hard drive',240,5);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(2,'Memory',120,6);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(3,'ZIP drive',150,4);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(4,'Floppy disk',5,6);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(5,'Monitor',240,1);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(6,'DVD drive',180,2);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(7,'CD drive',90,2);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(8,'Printer',270,3);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(9,'Toner cartridge',66,3);

INSERT INTO Products(Code,Name,Price,Manufacturer) VALUES(10,'DVD burner',180,2);

**Instruction**

You are supposed to download this document and then give your answers to the questions in the space provided then submit the filled document in the drop box provided in Moodle.

DO NOT WIRITE YOUR ANSWER IN ANY SPACE OTHER THAN THE SPACE PROVIDED.

**Write your query and results below each query**

|  |  |
| --- | --- |
| **Sr. #** | **Query Statements** |
| **1.1** | Select the names of all the products in the store. |
| **Query** | select name from products; |
| **Result** | +-----------------+  | name |  +-----------------+  | Hard drive |  | Memory |  | ZIP drive |  | Floppy disk |  | Monitor |  | DVD drive |  | CD drive |  | Printer |  | Toner cartridge |  | DVD burner |  +-----------------+  10 rows in set (0.00 sec) |
| **1.2** | Select the names and the prices of all the products in the store. |
| **Query** | select name, price from products; |
| **Result** | +-----------------+-------+  | name | price |  +-----------------+-------+  | Hard drive | 240 |  | Memory | 120 |  | ZIP drive | 150 |  | Floppy disk | 5 |  | Monitor | 240 |  | DVD drive | 180 |  | CD drive | 90 |  | Printer | 270 |  | Toner cartridge | 66 |  | DVD burner | 180 |  +-----------------+-------+  10 rows in set (0.00 sec) |
| **1.3** | Select the name of the products with a price less than or equal to $200. |
| **Query** | select name from products  -> where price <= 200; |
| **Result** | +-----------------+  | name |  +-----------------+  | Memory |  | ZIP drive |  | Floppy disk |  | DVD drive |  | CD drive |  | Toner cartridge |  | DVD burner |  +-----------------+  7 rows in set (0.00 sec) |
| **1.4** | Select all the products with a price between $60 and $120. |
| **Query** | select \* from products where price between 60 and 200; |
| **Result** | +------+-----------------+-------+--------------+  | Code | Name | Price | Manufacturer |  +------+-----------------+-------+--------------+  | 2 | Memory | 120 | 6 |  | 3 | ZIP drive | 150 | 4 |  | 6 | DVD drive | 180 | 2 |  | 7 | CD drive | 90 | 2 |  | 9 | Toner cartridge | 66 | 3 |  | 10 | DVD burner | 180 | 2 |  +------+-----------------+-------+--------------+  6 rows in set (0.00 sec) |
| **1.5** | Select the name and price in cents (i.e., the price must be multiplied by 100) |
| **Query** | select name, (price\*100) as cents from products; |
| **Result** | +-----------------+-------+  | name | cents |  +-----------------+-------+  | Hard drive | 24000 |  | Memory | 12000 |  | ZIP drive | 15000 |  | Floppy disk | 500 |  | Monitor | 24000 |  | DVD drive | 18000 |  | CD drive | 9000 |  | Printer | 27000 |  | Toner cartridge | 6600 |  | DVD burner | 18000 |  +-----------------+-------+ |
| **1.6** | Compute the average price of all the products. |
| **Query** | select avg(price) from products; |
| **Result** | +------------+  | avg(price) |  +------------+  | 154.1 |  +------------+  1 row in set (0.00 sec) |
| **1.7** | Compute the average price of all products with manufacturer code equal to 2. |
| **Query** | select avg(price) from products  -> where Manufacturer = 2; |
| **Result** | +------------+  | avg(price) |  +------------+  | 150 |  +------------+  1 row in set (0.00 sec) |
| **1.8** | Compute the number of products with a price larger than or equal to $180. |
| **Query** | select count(\*) from products  -> where price >= 180; |
| **Result** | +----------+  | count(\*) |  +----------+  | 5 |  +----------+  1 row in set (0.00 sec) |
| **1.9** | Select the name and price of all products with a price larger than or equal to $180, and sort first by price (in descending order), and then by name (in ascending order). |
| **Query** |  |
| **Result** |  |
| **1.10** | Select the name and price of the cheapest product. |
| **Query** |  |
| **Result** |  |
| **1.11** | Add a new product: Loudspeakers, $70, manufacturer 2. |
| **Query** |  |
| **Result** |  |
| **1.12** | Update the name of product 8 to "Laser Printer". |
| **Query** |  |
| **Result** |  |
| **1.13** | Apply a 10% discount to all products. |
| **Query** |  |
| **Result** |  |
| **1.14** | Apply a 10% discount to all products with a price larger than or equal to $120. |
| **Query** |  |
| **Result** |  |
| **1.15** | Display those products whose manufacturer’s name is "Creative labs" |
| **Query** |  |
| **Result** |  |
| **1.16** | Display those products whose manufacturer’s code is 1, 3, or 6 |
| **Query** |  |
| **Result** |  |
| **1.17** | Display those products whose name starts with "M" |
| **Query** |  |
| **Result** |  |
| **1.18** | Display those products whose name ends with "e" |
| **Query** |  |
| **Result** |  |
| **1.19** | Display those products whose name starts with "a" and ends with "e" |
| **Query** |  |
| **Result** |  |
| **1.20** | Display those products whose name contains "drive" |
| **Query** |  |
| **Result** |  |