

Table Name: Product

NAME	DATA TYPE	SIZE
Make	Varchar	20
Model	Varchar	20
Type	Varchar	20

✓

Table Name: PC

NAME	DATA TYPE	SIZE
Model	Varchar	20
Speed	Number	6,2
Ram	Number	5
HD	Number	5
BD	Number	5
Price	Number	10,2

✓

Table Name: Laptop

NAME	DATA TYPE	SIZE
Model	Varchar	20
Speed	Number	6,2
Ram	Number	5
HD	Number	5
Screen	Number	6,2
Price	Number	10,2

✓

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NAME: LAB ASSIGNMENT - 02

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1. Create the tables described below:

a. CREATE TABLE Product (

 Maker varchar(20),

 Model varchar(20),

 Type varchar(20));

b. CREATE TABLE PC (

 Model varchar(20),

 Speed float(6,2),

 Ram int(5),

 HD int(5),

 RD int(5),

 Price float(10,2));

c. CREATE TABLE Laptop (

 Model varchar(20),

 Speed float(6,2),

 Ram int(5),

 HD int(5),

 Screen float(6,2),

 Price float(10,2));

Teacher's Signature:

Table Name: Printer

NAME	DATA TYPE	SIZE
Model	Varchar	20
Colour	Varchar	20
Type	Varchar	10
Price	Number	10,2

a)

Maker	Model	Type
HP	A101	Laptop
Asus	A102	PC
DELL	A103	Printer
HP	A104	Printer
Asus	A105	Laptop
LG	A106	PC

b)

Model	Speed	Ram	HD	RD	Price
P501	2.4	4	72	4x	1100
P502	3	8	48	8x	3500
A102	4	16	240	16x	18000
J504	1.5	2	64	4x	1700
A106	2.8	8	128	12x	5000
C505	1.7	4	32	NULL	2500

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a. CREATE TABLE Printer(

Model varchar(30),

Colour varchar(30),

Type varchar(10),

Price float(10,2));

b. Insert the following data into their respective tables:

a. INSERT INTO Product (Maker, Model, Type) VALUES

('HP', 'A101', 'Laptop'),

('Asus', 'A102', 'PC'),

('DELL', 'A103', 'Printer'),

('HP', 'A104', 'Printer'),

('Asus', 'A105', 'Laptop'),

('LG', 'A106', 'PC');

b. INSERT INTO PC (Model, Speed, Ram, HD, RD, Price) VALUES

('P501', 2.4, 4, 72, '4x', 1100),

('P502', 3, 8, 48, '8x', 2500),

('A102', 4, 16, 240, '16x', 15000),

('TS04', 1.5, 2, 64, '4x', 1700),

('A106', 2.8, 8, 128, '12x', 8000),

('CS05', 1.7, 4, 32, null, 2500);

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c)

Model	Speed	Ram	HD	Screen	Price
L701	2.4	4	48	15.1	2200
L702	3	8	NULL	13.3	1900
A101	4	16	240	17	5200
L703	1.8	2	32	15.5	1150
A105	2.1	8	128	NULL	4200
L705	2.7	4	72	15.5	2700

d)

Model	Colour	Type	Price
PN401	Cyan	Laser	1000
A103	Cyan	Inkjet	2200
PN402	NULL	3-D.	5000
PN403	NULL	Laser	1900
A104	Black	Thermal	1750
PN405	white	Inkjet	2600

e)

Model	Speed	HD
P501	2.40	72
P502	3.00	48
J504	1.50	64
A106	2.80	128
C505	1.10	32

c. INSERT INTO Laptop (Model, Speed, Ram, HD, Screen, Price) VALUES

(‘L701’, 2.4, 4, 48, 15.1, 2200),
(‘L702’, 3, 8, NULL, 13.3, 1900),
(‘A101’, 4, 16, 240, 17, 5200),
(‘L703’, 1.8, 2, 32, 15.5, 1150),
(‘A105’, 2.1, 8, 128, NULL, 4500),
(‘L705’, 2.7, 4, 72, 15.5, 5700);

d. INSERT INTO Printer (Model, Colour, Type, Price) VALUES

(‘PN401’, ‘Cyan’, ‘Laser’, 1000),
(‘A103’, ‘Cyan’, ‘Inkjet’, 2200),
(‘PN402’, NULL, ‘3-D’, 5000),
(‘PN403’, NULL, ‘Laser’, 1800),
(‘A104’, ‘Black’, ‘Thermal’, 1750),
(‘PN405’, ‘White’, ‘Inkjet’, 2600);

3. Write the following queries based on schema as follows:-

1) Find the model numbers, speed and hard disk size for all PC's whose price is under 12000.

SELECT Model, Speed, HD FROM PC WHERE Price < 12000;

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2)

Model
P502
A102
A106
C505

Model
L701
A101
A105
L705

Model
A103
PN402
PN405

3)

Model	Colour	Type	Price
PN401	Cyan	Laser	1000.00
A103	Cyan	Inkjet	8000.00
PN402	NULL	3-D	5000.00
PN403	NULL	Laser	1500.90
A104	Black	Thermal	1450.00
PN405	white	Inkjet	8600.00

4)

Model	Ram	Screen
L701	4	15.10
A101	16	17.00
A102	8	NULL
L705	4	15.50

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2) Find the products cost more than 2000.

~~SELECT Model FROM PC WHERE Price > 2000;~~

~~SELECT Model FROM Laptop WHERE Price > 2000;~~

~~SELECT Model FROM Printer WHERE Price > 2000;~~

3) Find the menu features of printers.

~~SELECT * FROM Printer;~~

4) Find the model number, memory size and screen size for laptops, costing more than 2000.

~~SELECT Model, Ram, Screen FROM Laptop WHERE Price > 2000;~~

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5)

Empty Set

6)

Model	Speed
A101	4.00
A105	2.10

7)

Model	Price
A103	15000.00
A106	4200.00

Model	Price
A101	5200.00
A106	8000.00

Model	Price
A103	2200.00
A104	1750.00

8)

Maker
HP

9)

avg(Speed)
2.566667

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5) Find the model number, speed and hard-disk size for those PCs that have either a 12x or 16x DVD and price less than 2000.

SELECT Model, Speed, HD FROM PC WHERE Price < 2000
AND RD IN ('12x', '16x');

6) Give the manufacturer and speed of laptop with a hard-disk of least thirty gigabytes.

SELECT Product.Maker, Speed FROM Laptop JOIN Product
ON (Product.Model = Laptop.Model) WHERE HD >= 30;

7) Find the model number and price of all products made by manufacturers.

SELECT Product.Model, Price FROM PC JOIN Product ON
(Product.Model = PC.Model);

SELECT Product.Model, Price FROM Laptop JOIN Product
ON (Product.Model = Laptop.Model);

SELECT Product.Model, Price FROM Printer JOIN Product ON
(Product.Model = Printer.Model);

8) Find those manufacturers that sell laptops but not PCs.

SELECT Maker FROM Product WHERE Type = "Laptop" AND
Maker NOT IN (SELECT Maker FROM Product WHERE
Type = "PC");

9) Find the avg speed of PC's.

SELECT Avg(Speed) FROM PC;

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10)

avg(Speed)
2.960000

11)

Model	Speed	HD.
PS01	2.40	72

12)

max(Price)
5000.00

13)

Empty Set

14)

Price	Maker
1750.00	HP

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10) Find the average speed of laptops costing over 2000.
 SELECT AVG(Speed) FROM Laptop WHERE Price > 2000.

11) Find the model number, speed and hard disk size for all
 PC's whose price is under 1200.

SELECT Model, Speed, HD FROM PC WHERE Price < 1200.

12) Find the printer with highest price.

SELECT MAX(Price) FROM Printer;

13) Find the laptop whose speed is slower than that of any PC.

SELECT Product.Type, Laptop.Model, Laptop.Speed from
 Product JOIN Laptop ON (Product.Model = Laptop.Model)
 WHERE Speed < ALL (SELECT Speed FROM PC);

14) Find the maker of colour printer with the lowest price.

SELECT Price, Maker FROM Product INNER JOIN Printer ON
 (Product.Model = Printer.Model) AND Colour = "Black" WHERE
 Price = (SELECT MIN(Price) FROM Printer WHERE Colour = "Black");

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