Lab 3 CS254

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Q1.

Create a table cust with following columns

custid as not null,

Name.

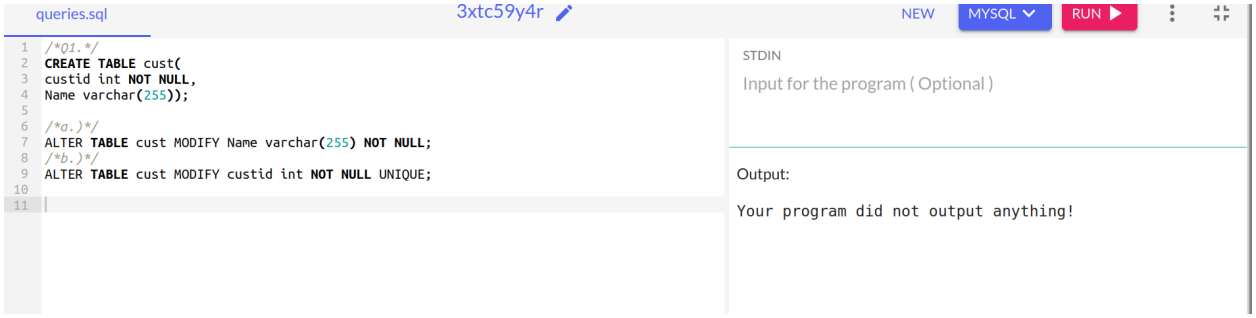
Assume appropriate data types.

```
/*Q1.*/
CREATE TABLE cust(
custid int NOT NULL,
Name varchar(255));
```

a.) Alter the table cust to add not null constraint to name.

b.) Alter the table cust to add unique constraint to custid.

```
/*a.)*/
ALTER TABLE cust MODIFY Name varchar(255) NOT NULL;
/*b.)*/
ALTER TABLE cust MODIFY custid int NOT NULL UNIQUE;
```

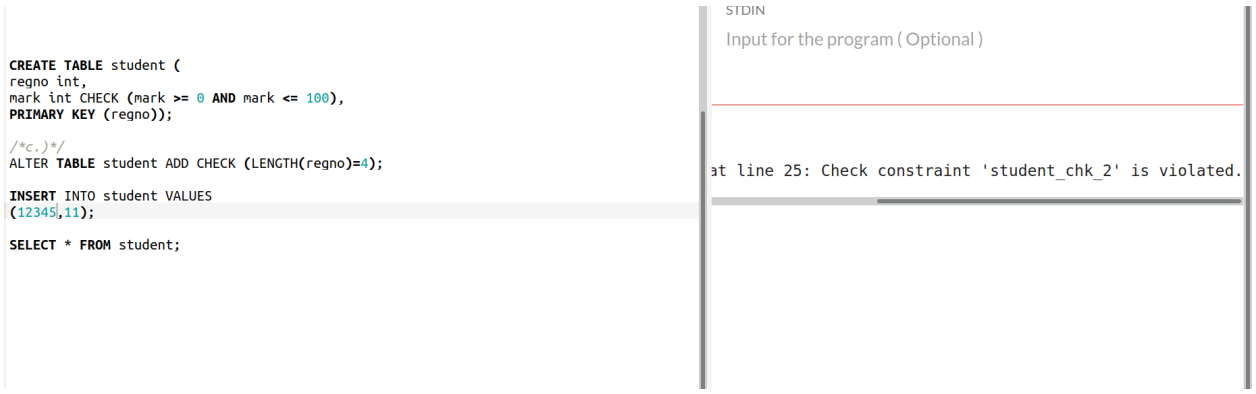


Create table student with following columns
regno,
mark.
Where 0<=mark<=100.

```
CREATE TABLE student (

regno int,

mark int CHECK (mark >= 0 AND mark <= 100),

PRIMARY KEY (regno));
```

c.) Alter the student table to add the constraint to check the length of regno is 4

```
/*c.)*/
ALTER TABLE student ADD CHECK (LENGTH(regno)=4);
INSERT INTO student VALUES
(12345,11);
SELECT * FROM student;
```



Create a table called EMP with the following structure.
EMPNO NUMBER(6)
ENAME VARCHAR2(20)
JOB VARCHAR2(10)
DEPTNO NUMBER(3)
SAL NUMBER(7,2)

```
CREATE TABLE EMP (

EMPNO INT,

ENAME VARCHAR(20),

JOB VARCHAR(10),

DEPTNO INT,

SAL DECIMAL(7,2));
```

d.) Allow NULL for all columns except ename and job.

e.) Add a column experience to the emp table. experience numeric null allowed.

f.) Modify the column width of the job field of emp table.

```
/*d.)*/
ALTER TABLE EMP
MODIFY ENAME VARCHAR(20) NOT NULL,
MODIFY JOB VARCHAR(10) NOT NULL;

/*e.)*/
ALTER TABLE EMP ADD COLUMN EXPERIENCE INT;

/*f.)*/
ALTER TABLE EMP MODIFY JOB VARCHAR(20) NOT NULL;

INSERT INTO EMP VALUES
```

```
(1,'Mr.abc','Cleaner',12,667.12,12);


SELECT * FROM EMP;
```

```
CREATE TABLE EMP (
EMPNO INT,
ENAME VARCHAR(20),
JOB VARCHAR(10),
DEPTNO INT,
SAL DECIMAL(7,2));

/*d.)*/
ALTER TABLE EMP
MODIFY ENAME VARCHAR(20) NOT NULL,
MODIFY JOB VARCHAR(10) NOT NULL;

/*e.)*/
ALTER TABLE EMP ADD COLUMN EXPERIENCE INT;

/*f.)*/
ALTER TABLE EMP MODIFY JOB VARCHAR(20) NOT NULL;

INSERT INTO EMP VALUES
(1,'Mr.abc','Cleaner',12,667.12,12);

SELECT * FROM EMP;
```

Output:

```
EMPNO   ENAME   JOB     DEPTNO  SAL     EXPERIENCE
1       Mr.abc  Cleaner 12      667.12  12
```

Q2.Create a table Products with following columns:

ProductID,

ProductName,

SupplierID,

CategoryID,

Unit Price.

Assume appropriate data types.

Create a table Customers with following columns
CustomerID,
CustomerName,
ContactName,
Address,
City,
PostalCode,
Country.
Assume appropriate data types.
Insert at least 10 entries in each table.

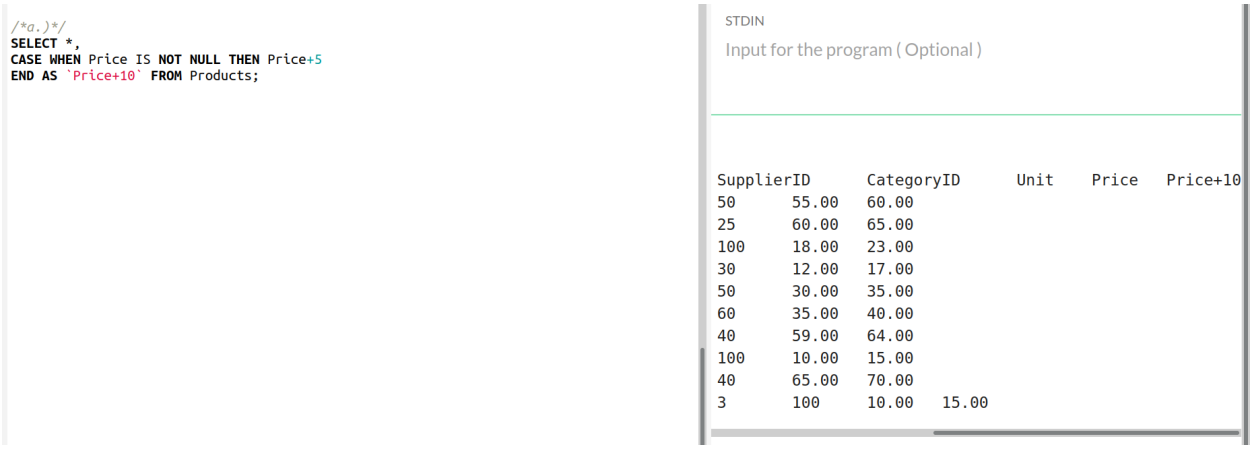
```sql
/*Q2.*/

CREATE TABLE Products (

ProductID int,

ProductName varchar(255),

SupplierID int,

CategoryID int,

Unit int,

Price decimal(10, 2),

PRIMARY KEY (ProductID));



CREATE TABLE Customers (

CustomerID int,

CustomerName varchar(255),

ContactName varchar(255),

Address varchar(255),

City varchar(255),

PostalCode varchar(15),

Country varchar(255),

PRIMARY KEY (CustomerID));
```

```
INSERT INTO Products VALUES

(1, 'Shirt', 2, 4, 50, 55),

(2, 'Pant', 1, 3, 25, 60),

(3, 'Towel', 2, 5, 100, 18),

(4, 'Stapler', 4, 2, 30, 12),

(5, 'Belt', 1, 3, 50, 30),

(6, 'Wallet', 1, 3, 60, 35),

(7, 'Jacket', 2, 4, 40, 59),

(8, 'Hanger', 3, 6, 100, 10),

(9, 'Handbag', 4, 4, 40, 65),

(10, 'Handkerchief', 1, 3, 100, 10);



INSERT INTO Customers VALUES

(1, 'Suresh', 'Ramesh', 'Rajajinagar', 'Bangalore', '560010',

'India'),

(2, 'John', 'Shaun', 'Oxford Street', 'London', 'W1D 2HS', 'UK'),

(3, 'Jim', 'Tim', 'Bond Street', 'London', 'W1S 1SP', 'UK'),

(4, 'Monica', 'Rachel', '19th Avenue', 'San Francisco', 'CA

94109', 'USA'),

(5, 'Ben', 'Clark', 'Rue de Rivoli', 'Paris', '75004', 'France'),
```

```
(6, 'Dan', 'Peter', 'Gibb Street', 'Birmingham', 'ON L1J 1Y4',

'UK'),

(7, 'Sam', 'Lombard', 'Surathkal', 'Mangalore', '575025',

'India'),

(8, 'Ram', 'Shyam', 'Goregaon', 'Mumbai', '400104', 'India'),

(9, 'Karan', 'Arjun', 'Bannerghata', 'Bangalore', '560070',

'India'),

(10, 'Om', 'Sid', 'Moonak', 'Punjab', '148033', 'India');
```

a.) Increase the Price of all products by 5 and display it as 'Price+10' in Products table.

```
/*a.)*/
SELECT *,
CASE WHEN Price IS NOT NULL THEN Price+5
END AS `Price+10` FROM Products;
```



b.) List all the items from Products whose Price=18

```
SELECT * FROM Products WHERE Price=18;
```

```
/*b.)*/
SELECT * FROM Products WHERE Price=18;
```

STDIN

Input for the program (Optional)

Output:

```
ProductID       ProductName     SupplierID      Category
3       Towel   2       5       100     18.00
```

c.) List all the items from Products whose Price is more than 30

```
SELECT * FROM Products WHERE Price>30;
```

```
/*c.)*/
SELECT * FROM Products WHERE Price>30;
```

STDIN

Input for the program (Optional)

Output:

```
ProductID       ProductName     SupplierID      Category
1       Shirt   2       4       50      55.00
2       Pant    1       3       25      60.00
6       Wallet  1       3       60      35.00
7       Jacket  2       4       40      59.00
9       Handbag 4       4       40      65.00
```

d.) List all the items from Products whose Price=18

```
SELECT * FROM Products WHERE Price!=18;
```

```
/*d.)*/
SELECT * FROM Products WHERE Price!=18;
```

STDIN

Input for the program (Optional)

Output:

```
ProductID       ProductName     SupplierID      Categor
1       Shirt   2       4       50      55.00
2       Pant    1       3       25      60.00
4       Stapler 4       2       30      12.00
5       Belt    1       3       50      30.00
6       Wallet  1       3       60      35.00
7       Jacket  2       4       40      59.00
8       Hanger  3       6       100     10.00
9       Handbag 4       4       40      65.00
10      Handkerchief    1       3       100     10.00
```

e.) List all the items from Products whose Price is between 50 and 60

```
SELECT * FROM Products WHERE Price BETWEEN 50 AND 60;
```

```
/*e.)*/
SELECT * FROM Products WHERE Price BETWEEN 50 AND 60;
```

STDIN

Input for the program (Optional)

Output:

ProductID	ProductName	SupplierID	Category
1	Shirt	2	4	50	55.00
2	Pant	1	3	25	60.00
7	Jacket	2	4	40	59.00

f.) List the customer details from Customers whose City is London and Country is UK

```
/*f.)*/
SELECT * FROM Customers WHERE City='London' AND Country='UK';
```

```
/*f.)*/
SELECT * FROM Customers WHERE City='London' AND Country='UK';
```

STDIN

Input for the program (Optional)

Output:

CustomerID	CustomerName	ContactName	Address
2	John	Shaun	Oxford Street	London	W1D 2HS
3	Jim	Tim	Bond Street	London	W1S 1SP

g.) List the customer details from Customers whose City matches with the list of cities among Paris,London, San Francisco

```
/*g.)*/
SELECT * FROM Customers WHERE City IN ('Paris', 'London', 'San
Francisco');
```

```
/*g.)*/
SELECT * FROM Customers WHERE City IN ('Paris', 'London', 'San
Francisco');
```

STDIN

Input for the program (Optional)

Output:

CustomerID	CustomerName	ContactName	Address
2	John	Shaun	Oxford Street	London	W1D 2HS
3	Jim	Tim	Bond Street	London	W1S 1SP
5	Ben	Clark	Rue de Rivoli	Paris	75004