Mohammad Ali Jinnah University
Chartered by Government of Sindh - Recognized by HEC

Quiz 3

Subject: DBMS Lab

Section: BM

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Quiz 3

Problem#1

MobileZone is a trendy mobile store based in Karachi, Pakistan. It purchases mobiles from manufacturers, stocks them in its store, and sells them for profits. MobileZone maintains the details of all branded mobile devices in a SQL Server database. To speed up the day-to-day transactions related to the database, it has been decided to use SQL Server triggers for commonly performed tasks. Table 1.1 describes the Mobile details.

1. Start with creating the table Mobiles. The structure of the table is described in Table 1. Add at least five records to the table. Ensure that the value of the column QtyOnHand is more than 20 for each of the mobiles.

```sql
create table Mobiles(
ProductCode Varchar(5) primary key,
BrandName Varchar(30),
Manufacturer Varchar(40),
UnitPrice Money,
QtyOnHand int CHECK (QtyOnHand>20)
);

insert into Mobiles values('A511','Apple Inc','Foxconn','25','21');
insert into Mobiles values('M254','Motorola','Lenovo Motorola','38','50')
insert into Mobiles values('AX50','Tecno','Transsion Holdings','95','42');
insert into Mobiles values('S427','Samsung Electronics Co','Samsung','36','32');
insert into Mobiles values('9C75','Huawei','Huawei Co','22','28');
```

	ProductCode	BrandName	Manufacturer	UnitPrice	QtyOnHand
1	9C75	Huawei	Huawei Technologies Group Co	22.00	28
2	A511	Apple Inc	Foxconn	25.00	21
3	AX50	Tecno	Transsion Holdings	95.00	42
4	M254	Motorola	Lenovo Motorola	38.00	50
5	S427	Samsung Electronics Co	Samsung	36.00	32

2. **Write statements to create an update the trigger named MobilePrice that will increment the UnitPrice by 1000 for all the mobiles.**

```
CREATE TRIGGER MobilePrice
ON Mobiles
AFTER update
AS
BEGIN
        update Mobiles set UnitPrice+=1000
END;

insert into Mobiles values('MO131','Motorola','Motorola','22','28',2021)
```

	ProductCode	BrandName	Manufacturer	UnitPrice	QtyOnHand	CurrentYear
1	9C75	Huawei	Huawei Technologies Group Co	1022.00	28	NULL
2	A511	Apple Inc	Foxconn	1025.00	21	2012
3	AX50	Tecno	Transsion Holdings	1095.00	42	NULL
4	M254	Motorola	Lenovo Motorola	1038.00	50	NULL
5	S427	Samsung Electronics Co	Samsung	1036.00	32	NULL

3. **Write statements to create an insert trigger named NewMobile that will insert the latest models of mobiles introduced by the company for the current year.**

```sql
--------------------Task 3
alter table Mobiles
add CurrentYear int

update Mobiles set CurrentYear = 2012 where ProductCode = 'A511';
update Mobiles set CurrentYear = 2015 where ProductCode = 'M254';
update Mobiles set CurrentYear = 2010 where ProductCode = 'AX50';
update Mobiles set CurrentYear = 2018 where ProductCode = 'S427';
update Mobiles set CurrentYear = 2021 where ProductCode = '9C75';

insert into Mobiles values('MO131','Motorola','Motorola','22','28',2021)

Select * from Mobiles


CREATE TRIGGER NewMobile
on Mobiles
instead of insert
as
begin
        if((select i.CurrentYear from inserted i) = Year(GetDate()))
                begin
                        insert into Mobiles select *  from inserted
                end
        else
                begin
                        RAISERROR ('The latest models of mobiles.' ,10,1)
                end
end

insert into Mobiles values('7S82','INFINIX','INFINIX','55','100',2021)
```

	ProductCode	BrandName	Manufacturer	UnitPrice	QtyOnHand	CurrentYear
1	9C75	Huawei	Huawei Technologies Group Co	1022.00	28	NULL
2	A511	Apple Inc	Foxconn	1025.00	21	2012
3	AX50	Tecno	Transsion Holdings	1095.00	42	NULL
4	M254	Motorola	Lenovo Motorola	1038.00	50	NULL
5	S427	Samsung Electronics Co	Samsung	1036.00	32	NULL

4. **Write statements to create a stored procedure DecreaseQuantity that will decrease the quantity on hand of specified brands by 25. The brand name should be supplied as input.**

```
---------------Task 4
CREATE procedure DecreaseQuantity(@BrandName varchar(30))
as
begin
        update Mobiles set QtyOnHand -= 25
                        where BrandName = @BrandName
end
```

5. **Execute the stored procedure DecreaseQuantity.**

```
--------------------Task 5

execute DecreaseQuantity 'INFINIX'
```

	ProductCode	BrandName	Manufacturer	UnitPrice	QtyOnHand	CurrentYear
1	7S82	INFINIX	INFINIX	1055.00	75	2021
2	9C75	Huawei	Huawei Technologies Group Co	2022.00	28	NULL
3	A511	Apple Inc	Foxconn	2025.00	21	2012
4	AX50	Tecno	Transsion Holdings	2095.00	42	NULL
5	M254	Motorola	Lenovo Motorola	2038.00	50	NULL
6	S427	Samsung Electronics Co	Samsung	2036.00	32	NULL