17- SQL Assignment -3 DOTNET

1. Re-create the Customers and Orders tables, enhancing their definition with all primary and foreign keys constraints.

CREATE TABLE dbo.Customers(

CustomerId char(5) NOT NULL,

CompanyName varchar(40) NOT NULL,

ContactName char(30) NULL,

[Address] varchar(60) NULL,

Town char(15) NULL,

Phone char(24) NULL,

Fax char(24) NULL,

CONSTRAINT PK\_CustomerID PRIMARY KEY (CustomerId)

)

CREATE TABLE dbo.Orders(

OrderId int NOT NULL PRIMARY KEY,

CustomerId char(5) NOT NULL,

OrderDate datetime DEFAULT (getdate()) NULL,

ShippedDate datetime NULL,

Freight money NULL,

ShipName varchar(40) NULL,

ShipAddress varchar(60) NULL,

Quantity int NULL,

CONSTRAINT FK\_CustomerID FOREIGN KEY (CustomerId) REFERENCES Customers(CustomerId)

)

1. Using the ALTER TABLE statement, create an integrity constraint that limits the possible values of the quantity column in the Orders table to values between 1 and 30.

ALTER TABLE dbo.Orders

ADD CONSTRAINT CHK\_ORDER\_LIMIT

CHECK (Quantity BETWEEN 1 AND 30)

1. With the help of the corresponding system procedures and the Transact-SQL statements CREATE DEFAULT and CREATE RULE, create the alias data type “Western Countries”. The possible values for the new data type are CA(for California), WA( for Washington), OR( for Oregon), and NM( for New Mexico). The default value is CA. Finally, create a table called Regions with the Columns City and Country using the new data type for the later.

Create Type

CREATE TYPE DBO.WesternCountries

FROM VARCHAR(25) NOT NULL

Create Default

CREATE DEFAULT Default\_CITY

AS 'CA'

Crate Region Table

CREATE TABLE DBO.Regions

(

City WesternCountries,

Country nvarchar(15)

)

Create Rules:

CREATE RULE RULE\_CITYNAME

AS

(@City='CA')

OR (@City='WA')

OR (@City='OR')

OR (@City='NM')

Bind Default value to Table

EXEC sp\_bindefault 'Default\_CITY', 'WesternCountries'

Bind Rule to Table

EXEC sp\_bindrule 'RULE\_CITYNAME', 'WesternCountries'

1. Display all integrity constraints for the Orders table

EXEC sp\_helpconstraint '[dbo].[Orders]'

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| constraint\_type | constraint\_name | delete\_action | update\_action | status\_enabled | status\_for\_replication | constraint\_keys |
| CHECK on column Quantity | CHK\_ORDER\_LIMIT | (n/a) | (n/a) | Enabled | Is\_For\_Replication | ([Quantity]>=(1) AND [Quantity]<=(30)) |
| DEFAULT on column OrderDate | DF\_\_Orders\_\_OrderDat\_\_3D5E1FD2 | (n/a) | (n/a) | (n/a) | (n/a) | (getdate()) |
| FOREIGN KEY | FK\_CustomerID | No Action | No Action | Enabled | Is\_For\_Replication | CustomerId |
|  |  |  |  |  |  | REFERENCES DotNetAssignments.dbo.Customers (CustomerId) |
| PRIMARY KEY (clustered) | PK\_\_Orders\_\_C3905BCFB807CEBE | (n/a) | (n/a) | (n/a) | (n/a) | OrderId |

1. Delete the primary key of the Customers table. Why isn’t that working?

ALTER TABLE [dbo].[Customers]

DROP column [CustomerId]

If we try to delete the primary key column SQL server won’t allow to delete it because it’s been referenced as foreign key in the Orders table. Please see the below error while executing above query.

Msg 5074, Level 16, State 1, Line 1

The object 'PK\_Customers' is dependent on column 'CustomerId'.

Msg 5074, Level 16, State 1, Line 1

The object 'FK\_CustomerID' is dependent on column 'CustomerId'.

1. Delete the integrity constraint defined in Step#2

ALTER TABLE [dbo].[Orders]

DROP CONSTRAINT [CHK\_ORDER\_LIMIT]

1. Write a function that will return the age of the person given his or her date of birth

CREATE FUNCTION GetMyAge

(

@DOB date

)

RETURNS int

AS

BEGIN

DECLARE @MyAge int;

SELECT @MyAge= CONVERT (INT, FLOOR(DATEDIFF(DAY,@DOB,GETDATE())/365))

RETURN @MyAge

END

GO

Ex. Function Call:

SELECT [dbo].[GetMyAge] ('02-04-2014') MyAge

Result:

MyAge

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1. Write a procedure that accepts name and data of birth of the student and inserts the data in the student table with the date computed. The SID should be largest sid in the table +1.

CREATE PROCEDURE InsertStudentInfo

(

@StudentName nvarchar(15),

@DOB date

)

AS

BEGIN

BEGIN TRY

DECLARE @MaxSId int;

SELECT @MaxSId= MAX(SID) FROM DBO.STUDENT ;

INSERT INTO STUDENT(SID, NAME,DOB) VALUES(@MaxSId+1,@StudentName,@DOB);

END TRY

BEGIN CATCH

declare @error int, @message varchar(500);

select @error = ERROR\_NUMBER(),

@message = ERROR\_MESSAGE();

raiserror ('Error while inserting data in InsertStudentInfo:', @error, @message) ;

return;

END CATCH

END