

## Data Definition Questions: (using SQL **NOT GUI**)

1. Create a table named "Employees" with columns for ID (integer), Name (varchar), and Salary (decimal).

```
CREATE TABLE Employees
(
emp_id int primary key,
name varchar(30),
salary decimal(10,2) ,
);
```

2. Add a new column named "Department" to the "Employees" table with data type varchar(50).

```
ALTER TABLE Employees
ADD Department varchar(50);
```

3. Remove the "Salary" column from the "Employees" table.

```
ALTER TABLE Employees
drop COLUMN salary;
```

4. Rename the "Department" column in the "Employees" table to "DeptName".

```
EXEC sp_rename 'Employees.Department'
, 'DeptName' , 'COLUMN';
```

5. Create a new table called "Projects" with columns for ProjectID (integer) and ProjectName (varchar).

```
CREATE TABLE Projects
(
ProjectID int primary key,
ProjectName varchar(50) ,
);
```

6. Add a primary key constraint to the "Employees" table for the "ID" column.

```
ALTER TABLE Projects  
ADD CONSTRAINT ID_PK primary key(ProjectID)
```

7. Create a foreign key relationship between the "Employees" table (referencing "ID") and the "Projects" table (referencing "ProjectID").

```
ALTER TABLE Employees  
ADD project_id int ,  
CONSTRAINT project_id_FK foreign  
key(project_id)  
references Projects(ProjectID);
```

8. Remove the foreign key relationship between "Employees" and "Projects."

```
ALTER TABLE Employees  
drop CONSTRAINT project_id_FK;
```

9. Add a unique constraint to the "Name" column in the "Employees" table.

```
ALTER TABLE Employees  
ADD constraint UQ unique(name);
```

10. Create a table named "Customers" with columns for CustomerID (integer), FirstName (varchar), LastName (varchar), and Email (varchar), and Status (varchar).

```
CREATE TABLE Customers  
(  
CustomerID int primary key ,  
FirstName varchar(30),  
LastName varchar(30),  
Email varchar(30),  
Status varchar(10)  
);
```

11. Add a unique constraint to the combination of "FirstName" and "LastName" columns in the "Customers" table.

```
alter table Customers  
ADD constraint Fname_UQ unique(LastName),  
constraint Lname_UQ unique(FirstName)
```

12. Add a default value of 'Active' for the "Status" column in the "Customers" table, where the default value should be applied when a new record is inserted.

```
alter table Customers  
add constraint status_default default  
'Active' for Status;
```

13. Create a table named "Orders" with columns for OrderID (integer), CustomerID (integer), OrderDate (datetime), and TotalAmount (decimal).

```
create table Orders  
(  
OrderID int primary key,  
CustomerID int,  
OrderDate date,  
TotalAmount decimal(10,2),  
);
```

14. Add a check constraint to the "TotalAmount" column in the "Orders" table to ensure that it is greater than zero.

```
alter table Orders  
add check(TotalAmount > 0)
```

15. Create a schema named "Sales" and move the "Orders" table into this schema.

```
create schema Sales;  
alter schema Sales transfer dbo.Orders;
```

16. Rename the "Orders" table to "SalesOrders."

```
EXEC sp_rename 'Sales.Orders'  
, 'Sales.SalesOrders' ;
```