

# Task Performance

## Common Table Expression (CTE)

2.

The screenshot shows a database management interface. On the left, a sidebar lists databases: SQLite, MariaDB, PostgreSQL, and MS SQL. Under MS SQL, there is a section for 'TEST - v.4.3' containing a 'Table' named 'demo' and a 'Column' list with 'ID', 'Name', and 'LeaderID'. The main area displays the SQL command to create the 'Students' table:

```
1 CREATE TABLE [Students](
2     [ID] [varchar](50) NULL,
3     [Name] [varchar](50) NULL,
4     [LeaderID] [varchar](50) NULL
5 );
```

3.

The screenshot shows the same database management interface. The main area displays a series of SQL INSERT statements to populate the 'Students' table:

```
1
2
3 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-1', N'Baldo', N'NULL')
4 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-2', N'Cardo', N'Stud-1')
5 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-3', N'Pedro', N'Stud-1')
6 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-4', N'Lunigning', N'Stud-1')
7 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-5', N'Paolo', N'Stud-2')
8 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-6', N'Bernardo', N'Stud-2')
9 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-7', N'Reinaldo', N'Stud-2')
10 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-8', N'Roberto', N'Stud-3')
11 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-9', N'Narciso', N'Stud-3')
12 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-10', N'Jopay', N'Stud-1')
13 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-11', N'Policarpio', N'Stud-10')
14 INSERT [dbo].[Students] ([ID], [Name], [LeaderID]) VALUES (N'Stud-12', N'Lunigning', N'Stud-10')
```

4-5.

```

MS SQL
1
2 ;WITH RankingStudentsRanking(id,name,leaderid, Rank) AS
3 (
4     SELECT id,name,leaderid, 0
5     AS Rank
6     FROM Students
7     WHERE leaderid = 'NULL'
8     UNION ALL
9
10
11     SELECT S.ID, S.Name, S.LeaderID,
12     R.Rank+1
13     FROM Students S
14     INNER JOIN RankingStudents R
15     ON R.ID=S.LeaderID
16 )
17 SELECT leaderid,ID, Name, Rank
18 FROM RankingStudents;

```

leaderid	ID	Name	Rank
Stud-1	Stud-3	Pedro	1
Stud-1	Stud-4	Lunigning	1
Stud-1	Stud-10	Jopay	1
Stud-10	Stud-11	Pollicarpio	2
Stud-10	Stud-12	Lunigning	2
Stud-3	Stud-8	Roberto	2
Stud-3	Stud-9	Narciso	2
Stud-2	Stud-5	Paolo	2
Stud-2	Stud-6	Bernardo	2
Stud-2	Stud-7	Reinaldo	2