

Generated PROCs:

1. Proc encrypted **GetDataStudent** for different statement as 'Insert, Update, and Delete' and affected on table **Student** directly if it's existed before or not

The screenshot shows four panes in SQL Server Management Studio:

- Top Left:** Object Explorer pane showing the procedure **GetDataStudent**.
- Top Right:** Results pane showing the output of an insert operation.
- Middle Left:** Results pane showing the output of **sp_helptext 'GetDatastudent'**.
- Middle Right:** Results pane showing the output of a delete operation.
- Bottom Left:** Results pane showing the output of another delete operation, which fails due to a constraint conflict.
- Bottom Right:** Messages pane showing the error message for the failed delete operation.

```

/*
    Execute GetDataStudent @id = NULL,
    @name = 'Ali Hassan',
    @email = 'ali@student.com',
    @phone = '01099999999',
    @IN_id = 3,
    @address = 'Nasr City',
    @MgrId = 2,
*/
70 %

Results Messages
Result
1 Inserted

EXEC GetDataStudent
24,
NULL, NULL, NULL,
NULL, NULL, NULL, NULL, NULL,
'Delete';
GO

sp_helptext 'GetDatastudent'
GO

% Messages
The text for object 'GetDataStudent' is encrypted.
Completion time: 2026-02-20T22:29:38.0583325+02:00

EXEC GetDataStudent
23,
NULL, NULL, NULL,
NULL, NULL, NULL, NULL, NULL,
'Delete';
GO

sp_helptext 'GetDataStudent'
0 %

Results Messages
Result
Deleted

Msg 547, Level 16, State 0, Procedure GetDataStudent, Line 39 [Batch Start Line 117]
The DELETE statement conflicted with the REFERENCE constraint "FK_StuExam_Student". The conflict occurred in database "ExaminationSystemDB", table "dbo.StuExam", column 'StdId'.
The statement has been terminated.

(1 row affected)

Completion time: 2026-02-20T22:28:57.5815363+02:00

```

```
EXEC GetDataStudent  
4,  
NULL, NULL, NULL,  
NULL, NULL, NULL, NULL,  
'Delete';  
GO  
  
sp_helptext 'GetDatastudent'  
GO  
*/
```

% ▾ ◀

Results Messages

Result
Student Not Found

70 % ▾ ◀

Results Messages

StdId	UserId	Stdname	Stdemail	Stdphone	Stdadd	Birthday	InId	Mgrid
1	1	6	Sara Ibrahim	sara.s@student.com	01200000001	Cairo, Maadi	2000-05-15	3 2
2	2	7	ahmed	ahmed12@gmail.com	12548378	cairo	1996-11-17	2 2
3	3	8	Nour Hany	nour.h@student.com	01200000003	Giza, 6th October	2002-08-20	2 1
4	23	2	Ahmed Ibrahim	ahmed.s@student.com	01200000005	Cairo, Maadi	2000-05-15	3 2
5	24	1	Ali Hassan	ali@student.com	01099999999	Nasr City	2001-04-10	3 2

The image shows two vertically stacked SSMS windows. Both windows have a title bar with 'Results' and 'Messages' tabs, and a zoom level of '70 %'. The main area displays a table with the following data:

	StdId	UserId	Stdname	Stdemail	Stdphone	Stdadd	Birthday	Inld	Mgrid
1	1	6	Sara Ibrahim	sara.s@student.com	01200000001	Cairo, Maadi	2000-05-15	3	2
2	2	7	ahmed	ahmed12@gmail.com	12548378	cairo	1996-11-17	2	2
3	3	8	Nour Hany	nour.h@student.com	01200000003	Giza, 6th October	2002-08-20	2	1
4	23	2	Sara Ibrahim	sara.s@student.com	01200000001	Cairo, Maadi	2000-05-15	3	2
5	24	1	Ali Hassan	ali@student.com	01099999999	Nasr City	2001-04-10	3	2

2. Proc encrypted **GetSelectStudent** for different statement as 'Select'
3. Proc encrypted **GetDataDepartment** for different statement as 'Insert, Update, and Delete'
and affected on table **Department** directly if it's existed before or not

```
Execute GetDataDepartment @Id = 9,  
                        @Name = 'Linux',  
                        @MgrId = 1,  
                        @StatementType = 'Update'
```

Go

70 %

 Results Messages

(1 row affected)

Msg 217, Level 16, State 1, Procedure GetDataDepartment, Line 45 [Batch Start Line 181]
Maximum stored procedure, function, trigger, or view nesting level exceeded (limit 32).

Completion time: 2026-02-20T22:39:44.0856206+02:00

70/96

1

The image shows two vertically stacked SSMS result panes. Both panes have a title bar with '70 %' and a back arrow icon. The top pane has tabs for 'Results' and 'Messages', with 'Results' selected. It displays a table with four columns: DeptId, DeptName, and Mgrid. The data is as follows:

	DeptId	DeptName	Mgrid
1	1	Information Technology	1
2	2	Python	2
3	3	Java	1
4	4	SQL	2
5	9	Linux	2

The bottom pane also has a title bar with '70 %' and a back arrow icon. It has tabs for 'Results' and 'Messages', with 'Results' selected. It displays a table with the same structure and data as the top pane:

	DeptId	DeptName	Mgrid
1	1	Information Technology	1
2	2	Python	2
3	3	Java	1
4	4	SQL	2

4. Proc encrypted **GetSelectDepartment** for different statement as 'Select'
5. Proc encrypted **GetDataCourse** for different statement as 'Insert, Update, and Delete' and affected on table **Course** directly if it's existed before or not

```

exec GetDataCourse 8,'C# Basics', 100, 200, 'delete'
GO
sp_helptext 'GetDataCourse'
GO
-----
```

70 %

Results **Messages**

```

Msg 547, Level 16, State 0, Procedure GetDataCourse, Line 27 [Batch Start Line 239]
The DELETE statement conflicted with the REFERENCE constraint "FK_Intcourse_Course". The conflict occurred in database "ExaminationSystemDB", table "dbo.Intcourse", column 'CrId'.
The statement has been terminated.
```

```

(1 row affected)
(0 rows affected)
```

6. Proc encrypted **GetSelectCourse** for different statement as 'Select'
7. Proc encrypted **GetDataInstructor** for different statement as 'Insert, Update, and Delete'

and affected on table **Instructor** directly if it's existed before or not

```

Exec GetDataInstructor 5,'salam','salam@inst.com',50000,8,'145268','insert'
GO
sp_helptext 'GetDataInstructor'
GO
-----
```

```

CREATE OR alter PROC GetSelectInstructor @id int
```

1% **Results** **Messages**

Result
Duplicate UserId

8. Proc encrypted **GetSelectInstructor** for different statement as 'Select'
 9. Proc encrypted **GetDataIns_Crs** for different statement as 'Insert, Update, and Delete'
- and affected on table **Intcourse** directly if it's existed before or not

The screenshot shows a SQL Server Management Studio (SSMS) interface. In the top pane, there is a query window containing the following T-SQL code:

```
EXEC GetDataIns_Crs 1, 8, 'delete'  
GO  
sp_helptext 'GetDataIns_Crs'  
GO
```

The status bar at the bottom of the window indicates "0 %". Below the query window, there is a toolbar with two tabs: "Results" and "Messages". The "Results" tab is selected. A results grid is displayed, showing one row with the following data:

	Result
1	Course or Instructor Not Found

10. Proc encrypted **GetSelectIns_Crs** for different statement as 'Select'
11. Proc encrypted **GetDataStudent_Exam** for different statement as 'Insert, Update, and Delete'
and affected on table **Stuexam** directly if it's existed before or not

```
END  
Exec GetDataStudent_Exam 23,14,150, 'insert'  
GO  
sp_helptext 'GetDataStudent_Exam'  
GO  
-----  
create proc GetSelectStudent_Exam  
with Encryption  
as  
    select * from StuExam  
Exec GetSelectStudent_Exam  
GO
```

70 %

Results Messages

Result
1 Inserted


```
END  
Exec GetDataStudent_Exam 23,5,150, 'delete'  
GO  
sp_helptext 'GetDataStudent_Exam'  
GO  
-----  
create proc GetSelectStudent_Exam  
with Encryption  
as  
    select * from StuExam  
Exec GetSelectStudent_Exam  
GO
```

70 %

Results Messages

Result
1 Student or Exam Not Found

12. Proc encrypted **GetDataStudent_Exam** for different statement as 'Select'
13. Proc encrypted **AddIntake** for Insertion the new intake by manager and affected on table **Intake** directly if it's existed before or not

```
END  
AddIntake 2, Intake56, 2024, 3, 2, 2  
GO  
SP_helptext 'AddIntake'  
70 % ▾  
Results Messages  


|   | (No column name)      |
|---|-----------------------|
| 1 | Intake already exists |


```

14. Proc encrypted **UpdateBranch** for Updation the branch by manager and affected on table **Branch** directly

```
UpdateBranch 3, 2, 'Cairo Branch', 'Maadi'  
GO  
70 % ▾  
Results Messages  


|   | (No column name)          |
|---|---------------------------|
| 1 | Branch added successfully |


```

15. Proc encrypted **AssignStdToEx** to assign the student to the specified exam with the specified start & end time, and affected on table **Stuexam** directly if it's existed before or not

```

END
AssignStdToEx 2, 14, '10:05:00.0000000', '10:45:00.0000000'
GO
SP_helptext 'AssignStdToEx'
GO

```

70 %

Messages

(1 row affected)

Completion time: 2026-02-20T23:04:47.2797802+02:00


```

END
AssignStdToEx 24, 1, '10:05:00.0000000', '10:45:00.0000000'
GO
SP_helptext 'AssignStdToEx'
GO

```

70 %

Results Messages

	Result
1	Error: Exam ID does not exist.

16. Proc encrypted **GenerateRandomExammm** to generate a random exam and affected on table **Exam** directly

	ExId	Extypes	InstId	CrsId	InId	Ex_date	StartTime	Endtime	Year	Totaltime	Totaldegree	options
1	2	Exam	1	1	2	2023-10-01	10:00:00.0000000	12:00:00.0000000	2023	120	100	Open Book
2	14	Exam	5	8	6	2025-11-01	10:00:00.0000000	12:00:00.0000000	2025	120	100	NULL
3	47	Exam	5	3	6	2025-11-01	10:00:00.0000000	12:00:00.0000000	2025	120	100	NULL

```
L GenerateRandomExammm 3, 'Exam', 3, 5, 6, 2025, '2025-11-01', '10:00:00.0000000', '12:00:00.0000000', 120
GO
70 % ▾
Results Messages
Result
1 Exam generated successfully
```



```
70 % ▾
Results Messages
StdId ExId Total_score Obtained_degree startTime endtime
1 1 2 100.00 100.00 10:05:00.0000000 11:30:00.0000000
2 2 2 0.00 0.00 10:10:00.0000000 11:45:00.0000000
3 2 14 0.00 NULL 10:05:00.0000000 10:45:00.0000000
4 3 2 200.00 NULL NULL NULL
5 23 2 0.00 NULL 10:05:00.0000000 10:45:00.0000000
6 23 14 150.00 NULL NULL NULL
```

➤ Created backup on

```
SELECT
    physical_device_name,
    backup_finish_date,
    backup_size/1024/1024 AS SizeMB
FROM msdb.dbo.backupset s
JOIN msdb.dbo.backupmediafamily f ON s.media_set_id = f.media_set_id
WHERE s.database_name = 'ExaminationSystemDB'
ORDER BY backup_finish_date DESC;
```



```
70 % ▾
Results Messages
physical_device_name backup_finish_date SizeMB
1 D:\ITI_Data Engineering\SQL\Mini Project.bak 2026-02-20 22:12:42.000 5.02343750000
```

```
BACKUP DATABASE ExaminationSystemDB
    TO DISK = 'D:\ITI_Data_Engineering\SQL\Mini Project.bak'
    WITH FORMAT

0 %
```

Messages

```
Processed 560 pages for database 'ExaminationSystemDB', file 'ExamSya_Primary' on file 1.
Processed 72 pages for database 'ExaminationSystemDB', file 'ExamSya_Data' on file 1.
Processed 2 pages for database 'ExaminationSystemDB', file 'ExamSya_Log' on file 1.
BACKUP DATABASE successfully processed 634 pages in 0.068 seconds (72.782 MB/sec).

Completion time: 2026-02-20T22:12:42.8940503+02:00
```

This PC > New Volume (D:) > ITI_Data_Engineering > SQL >			
Name	Date modified	Type	Size
Mini Project.bak	2/20/2026 10:12 PM	BAK File	5,176 KB