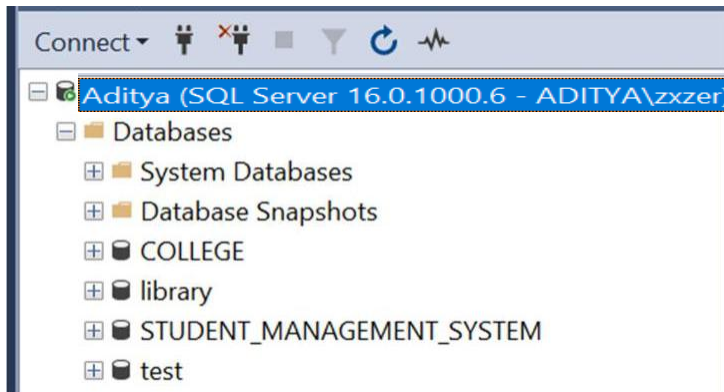


Lab-1: Use of Single Table

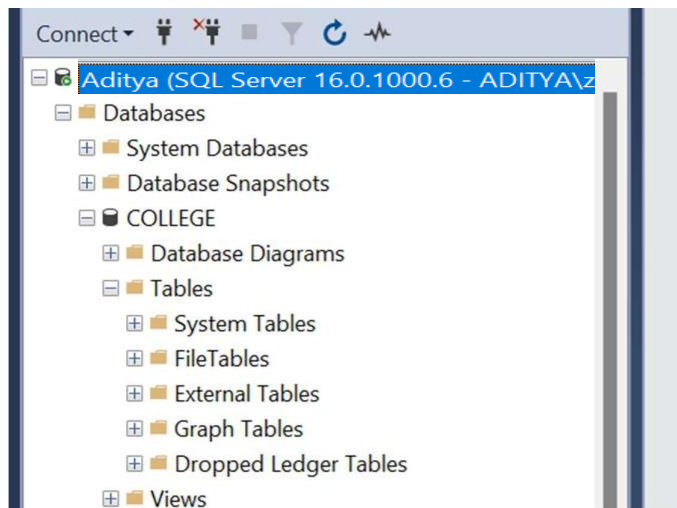
1. Creating Database:

Query: CREATE DATABASE College;



2. Creating Table:

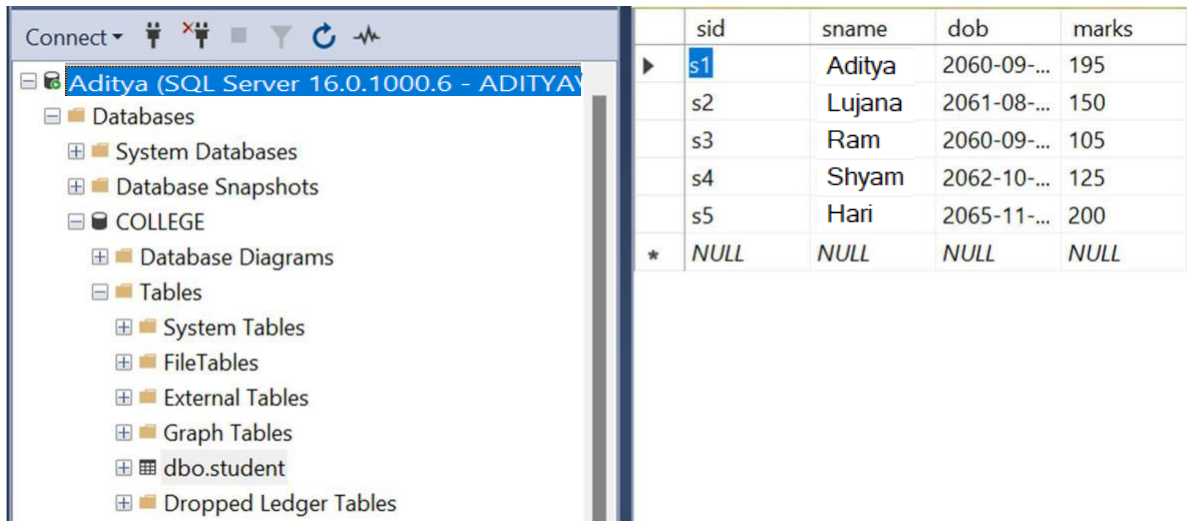
Query: CREATE TABLE Student (Sid VARCHAR (5) PRIMARY KEY,
sname VARCHAR (20),
dob DATE,
marks INT);



3. Data Insertion Through Query:

Query: VALUES ('s1', Aditya,'2060-09-16',195), ('s2',
Lujana,'2061-08-22',150), ('s3',
Ram,'2060-09-23',105), ('s4',
Shyam,'2062-10-24',125), ('s5',
Hari,'2065-11-25',200);







Data Insertion Through GUI:



sid	sname	dob	marks
s1	Aditya	2060-09-...	195
s2	Lujana	2061-08-...	150
s3	Ram	2060-09-...	105
s4	Shyam	2062-10-...	125
s5	Hari	2065-11-...	200
*	NULL	NULL	NULL

4. Display Complete Table:

Query: SELECT *
FROM student;

Connect ▾      

Aditya (SQL Server 16.0.1000.6 - ADITYA\

Databases

System Databases

Database Snapshots

COLLEGE

Database Diagrams

Tables



System Tables

FileTables

External Tables

Graph Tables

dbo.student

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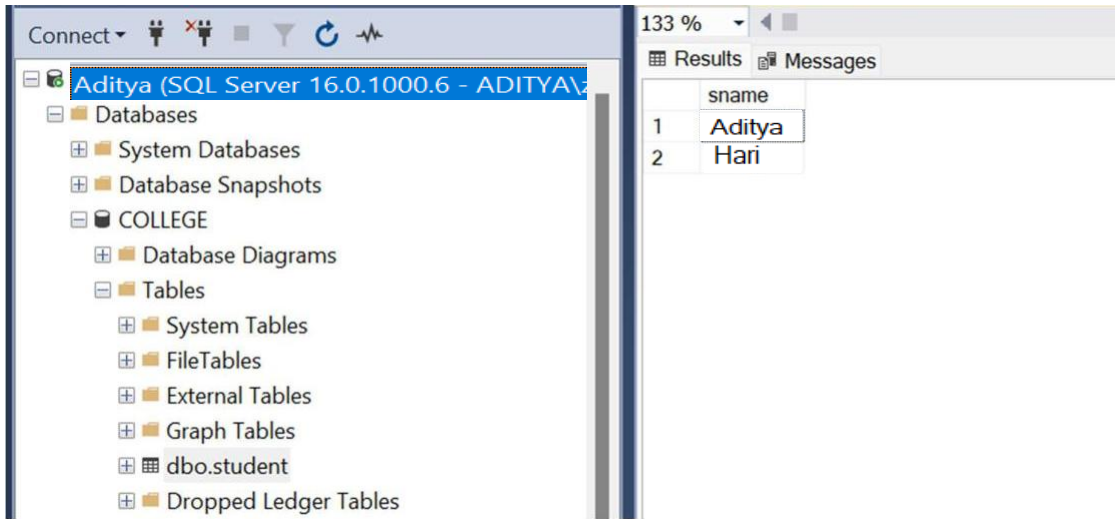
Results

Messages

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s3	Ram	2060-09-23	105
4	s4	Shyam	2062-10-24	125
5	s5	Hari	2065-11-25	200

5. Display Selected Data:

Query: SELECT sname
FROM student WHERE marks > 150;

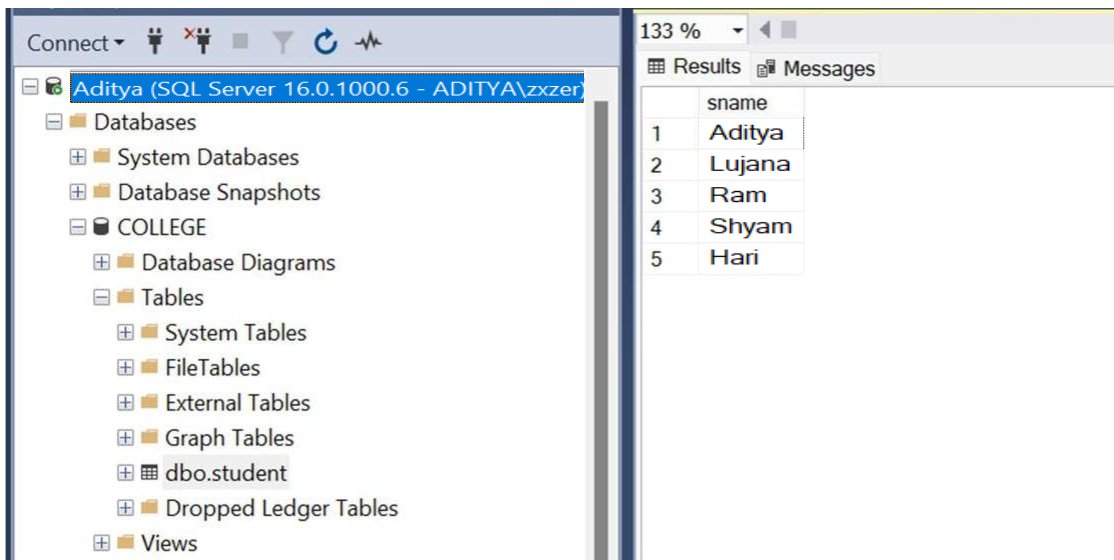


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. The 'Tables' folder under 'COLLEGE' is also expanded, showing the 'dbo.student' table. On the right, the 'Results' pane displays the output of the query. The results are as follows:

	sname
1	Aditya
2	Hari

6. Display name of all students of marks not equal to 200 or of dob less than '2070-01-01'.

Query: SELECT sname
FROM student
WHERE marks < > 200 OR dob < '2070-01-01';

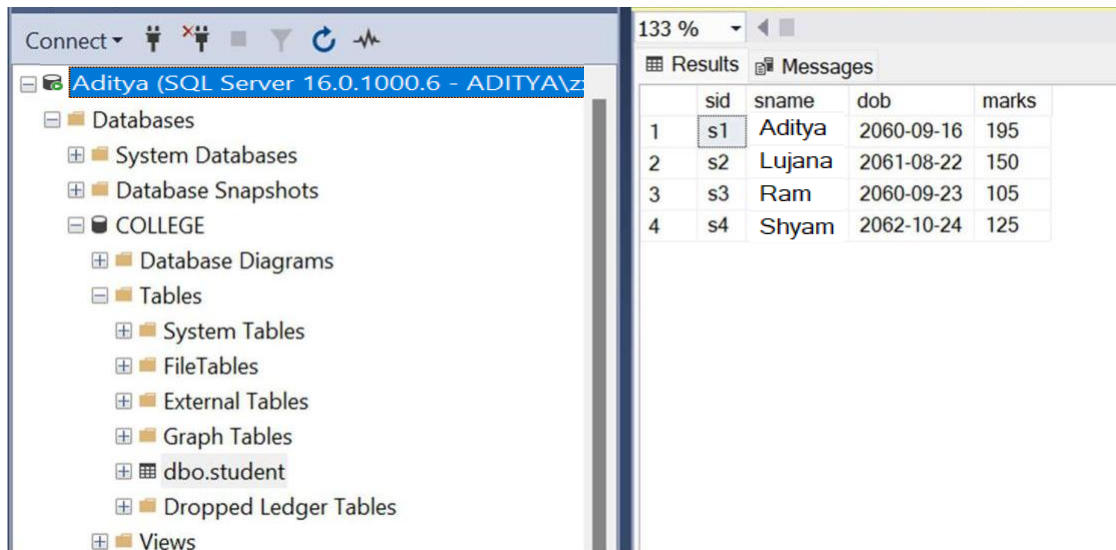


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. The 'Tables' folder under 'COLLEGE' is also expanded, showing the 'dbo.student' table. On the right, the 'Results' pane displays the output of the query. The results are as follows:

	sname
1	Aditya
2	Lujana
3	Ram
4	Shyam
5	Hari

7. Display all students of marks equal to 190 or 200 or 180 or 220 or 199.

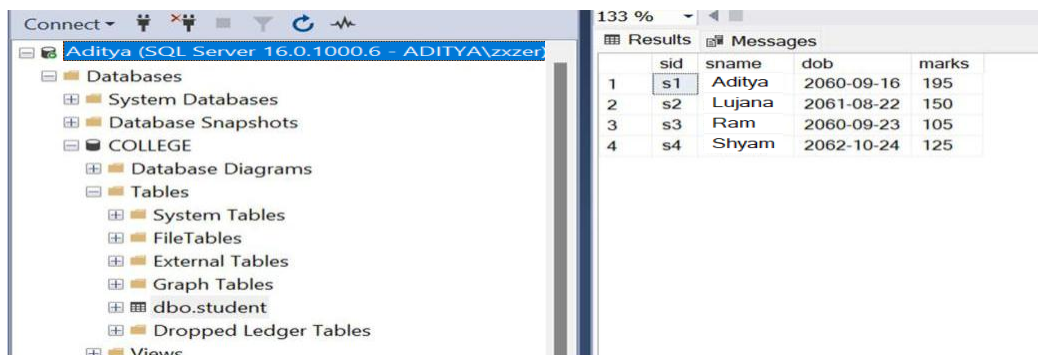
```
Query: SELECT *  
      FROM student  
      WHERE marks IN (190,200,180,220,199);  
      Or  
      SELECT *  
      FROM student  
      WHERE marks =190 OR marks=200 OR marks=180 OR  
      marks=220 OR marks=199;
```



	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s3	Ram	2060-09-23	105
4	s4	Shyam	2062-10-24	125

8.Display all students of marks not equal to 190 or 200 or 180 or 220 or 199.

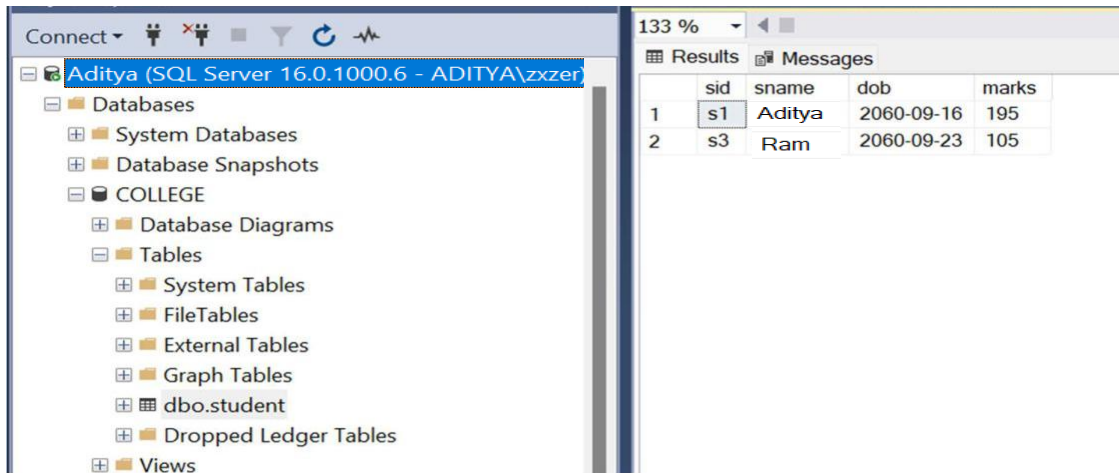
```
Query: SELECT *  
      FROM student  
      WHERE marks NOT  
      IN(190,200,180,220,199); Or  
      SELECT *  
      FROM student  
      WHERE marks < > 190 AND marks < > 200 AND marks < >180  
      AND marks < > 220 AND marks < > 199.
```



	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s3	Ram	2060-09-23	105
4	s4	Shyam	2062-10-24	125

9. Display all students of dob between '2050-01-01' and '2061-01-01' .

```
Query: SELECT *  
        FROM student  
        WHERE dob BETWEEN '2050-01-01' AND '2061-01-01';  
        Or  
        SELECT *  
        FROM student  
        WHERE dob >= '2050-01-01' AND dob <='2061-01-01' ;
```

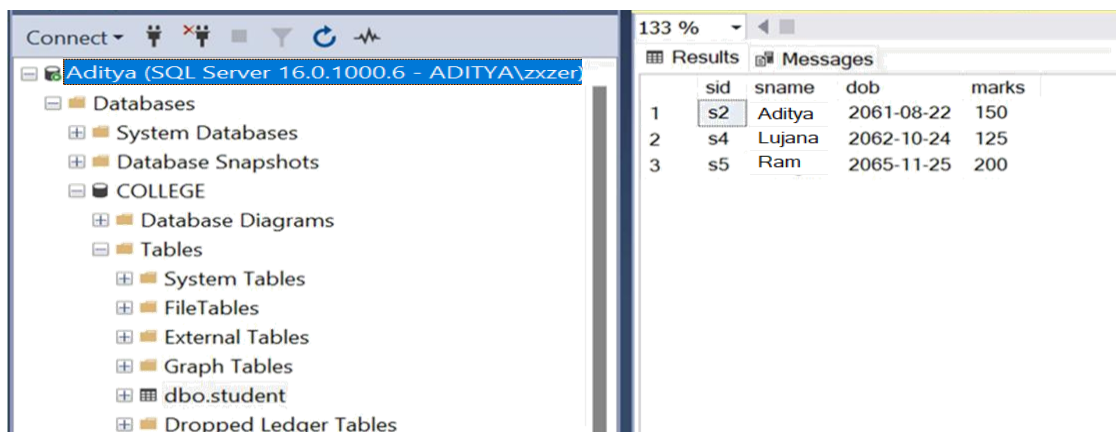


The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'COLLEGE' database structure, including 'Tables' and 'dbo.student'. The right pane shows the 'Results' of a query, displaying two rows of data from the 'student' table.

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s3	Ram	2060-09-23	105

10. Display all students of dob not between '2050-01-01' and '2061-01-01'.

```
Query: SELECT *  
        FROM student  
        WHERE dob NOT BETWEEN '2050-01-01' AND '2061-01-01'; Or  
        SELECT *  
        FROM student  
        WHERE dob < '2050-01-01' OR dob > '2061-01-01';
```

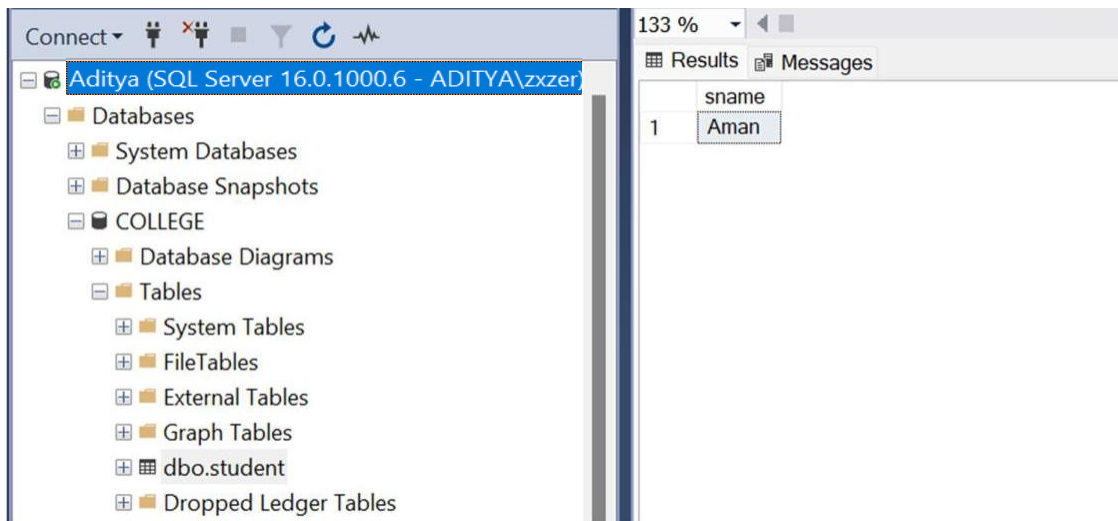


The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'COLLEGE' database structure, including 'Tables' and 'dbo.student'. The right pane shows the 'Results' of a query, displaying three rows of data from the 'student' table.

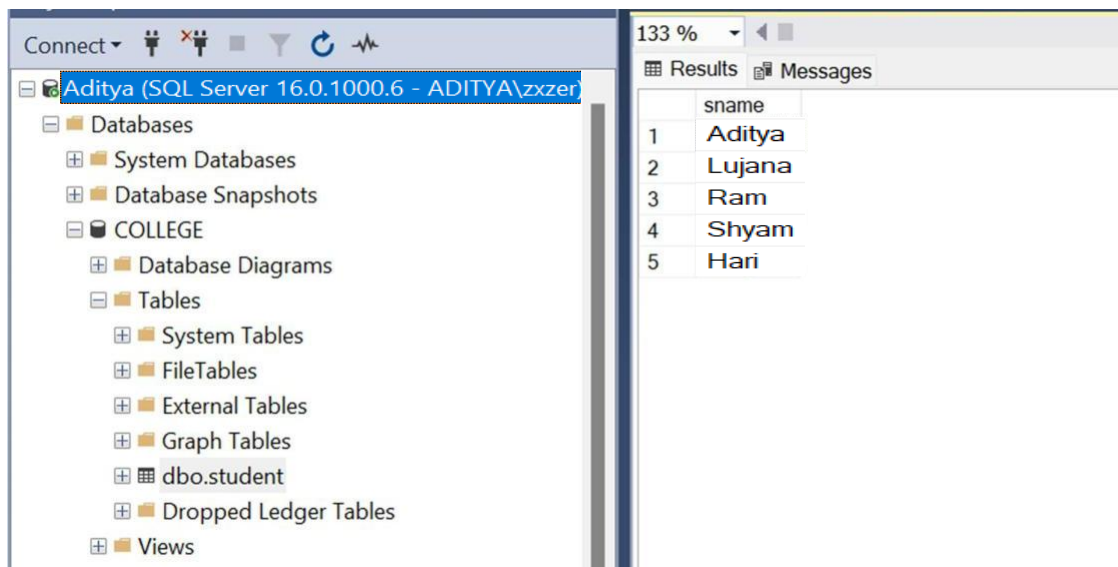
	sid	sname	dob	marks
1	s2	Aditya	2061-08-22	150
2	s4	Lujana	2062-10-24	125
3	s5	Ram	2065-11-25	200

11. Display name of all students whose marks is Null and Not Null.

Query for Null: `SELECT sname
FROM student
WHERE marks IS NULL;`



Query for Not Null: `SELECT sname
FROM student
WHERE marks IS NOT NULL;`



12. Display records of all students whose name contains 'u' as substring and dob is less than '2065-01-05'.

Query: `SELECT *
FROM Student
WHERE sname LIKE '%u%' AND dob < '2065-01-05';`

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Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)

- Databases
 - System Databases
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 - External Tables
 - Graph Tables
 - dbo.student
 - Dropped Ledger Tables

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Results Messages

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195

13.Display records of all students whose name length is not equal to 5.

Query: `SELECT *`
`FROM student`
`WHERE sname NOT LIKE '_____';`

Connect ▾

Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)

- Databases
 - System Databases
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 - Graph Tables
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 - Dropped Ledger Tables

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Results Messages

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s3	Ram	2060-09-23	105
4	s4	Shyam	2062-10-24	125
5	s5	Hari	2065-11-25	200
6	s6	Aman	2066-11-22	NULL

14.Display records of all students in ascending order of their dob.

Query: `SELECT *`
`FROM student`
`ORDER by dob ASC;`

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'COLLEGE' database is expanded, showing its tables: 'System Tables', 'FileTables', 'External Tables', 'Graph Tables', 'dbo.student', and 'Dropped Ledger Tables'. On the right, the 'Results' pane displays a table with 6 rows and 4 columns: 'sid', 'sname', 'dob', and 'marks'.

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s3	Lujana	2060-09-23	105
3	s2	Ram	2061-08-22	150
4	s4	Shyam	2062-10-24	125
5	s5	Hari	2065-11-25	200
6	s6	Aman	2066-11-22	NULL

15.Display records of all students of marks less than 200 and arrange the data in descending order of their marks.

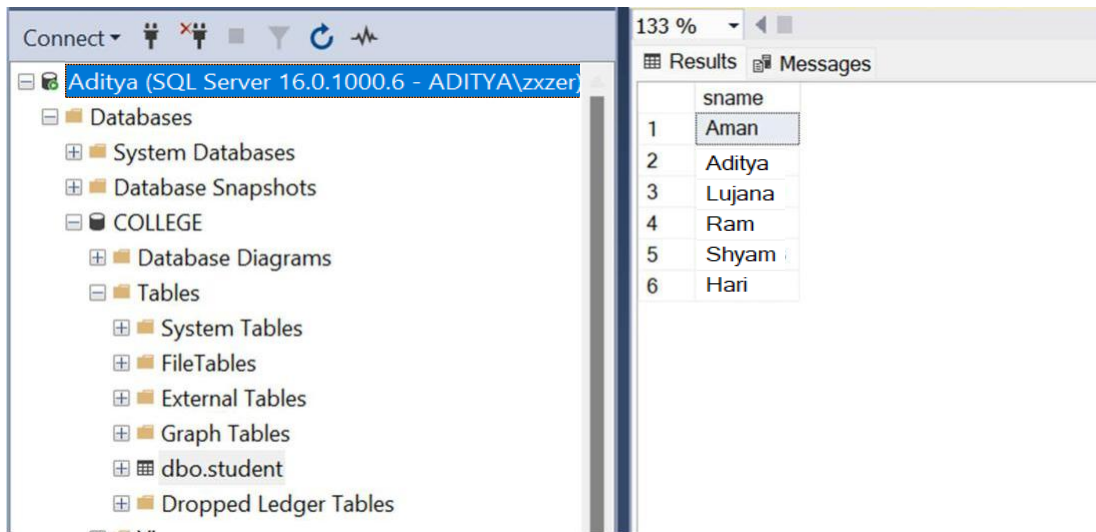
Query: SELECT *
FROM STUDENT
WHERE marks < 200
ORDER by marks DESC;

The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'COLLEGE' database is expanded, showing its tables: 'System Tables', 'FileTables', 'External Tables', 'Graph Tables', 'dbo.student', and 'Dropped Ledger Tables'. On the right, the 'Results' pane displays a table with 4 rows and 4 columns: 'sid', 'sname', 'dob', and 'marks'.

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s4	Ram	2062-10-24	125
4	s3	Shyam	2060-09-23	105

16. Display records of all students by displaying unique names.

Query: SELECT DISTINCT (sname)
FROM student;

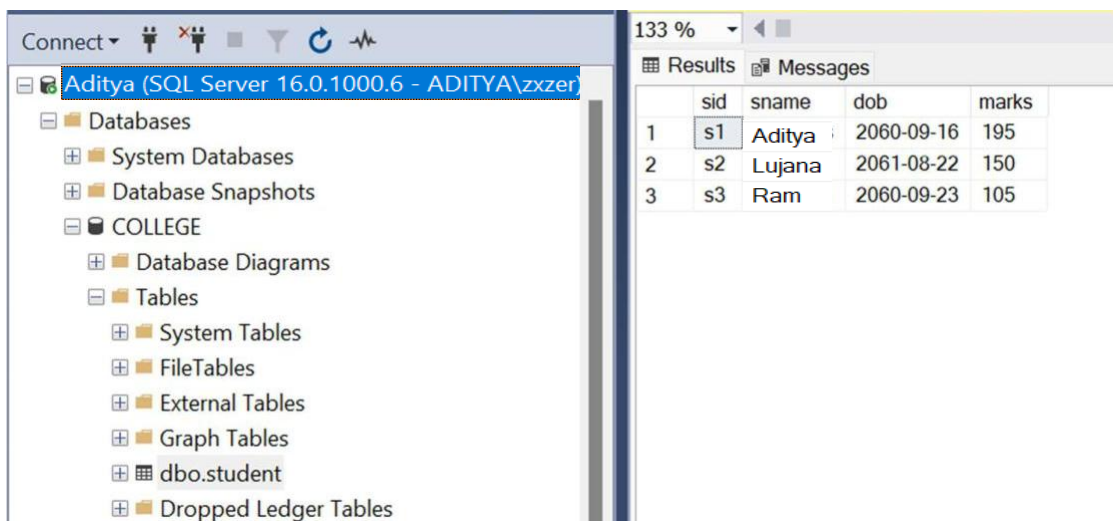


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database and its 'dbo.student' table. On the right, the 'Results' pane displays the output of the query. The results are as follows:

	sname
1	Aman
2	Aditya
3	Lujana
4	Ram
5	Shyam
6	Hari

17. Display top 3 records of student.

Query: Select TOP (3) *
From student;

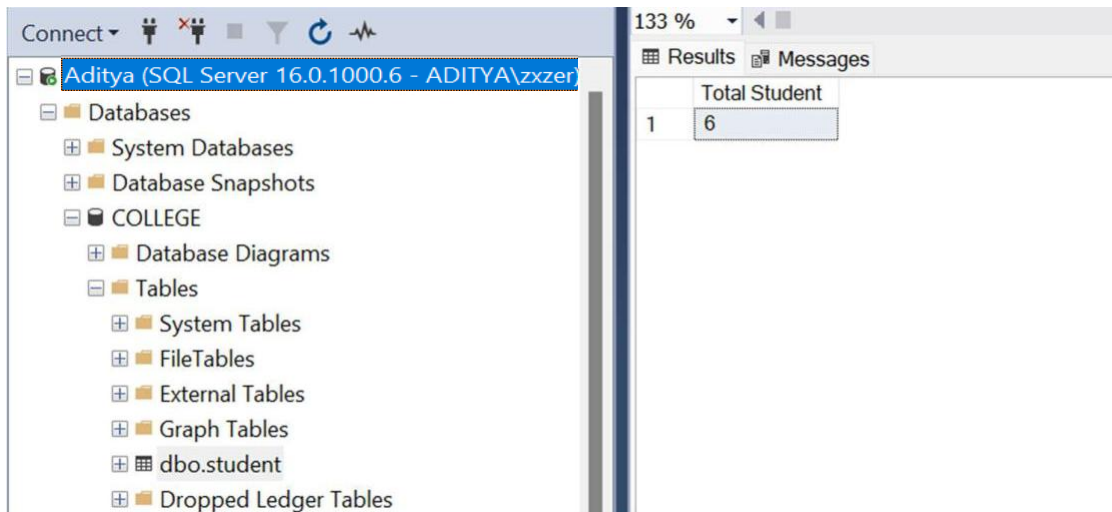


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database and its 'dbo.student' table. On the right, the 'Results' pane displays the output of the query. The results are as follows:

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Lujana	2061-08-22	150
3	s3	Ram	2060-09-23	105

18. Find total no of students.

Query: `SELECT COUNT (*) AS 'Total Student'
FROM student;`

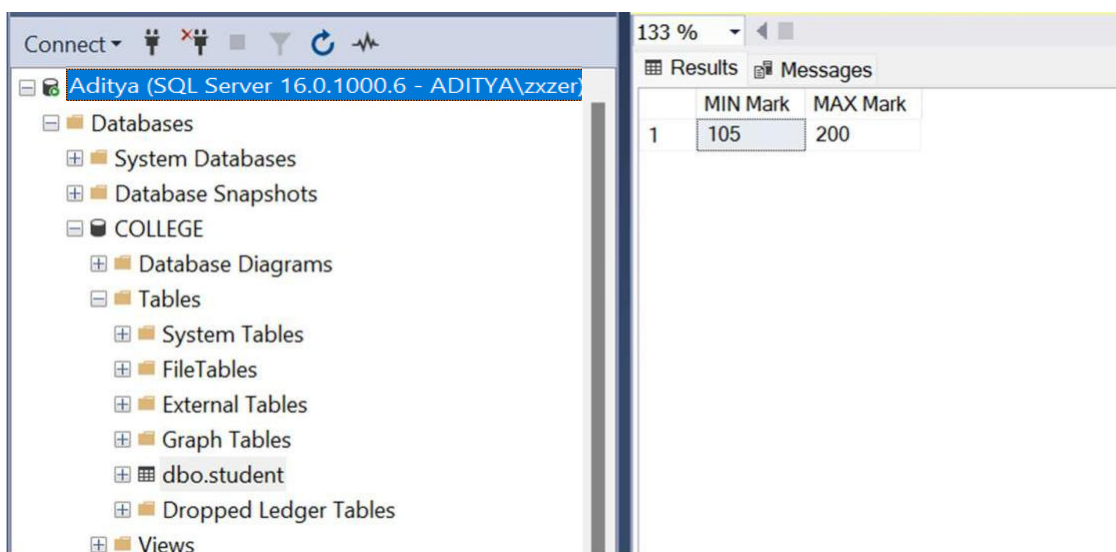


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. Under 'Tables', the 'dbo.student' table is selected. On the right, the 'Results' pane displays the output of the query. The query is `SELECT COUNT (*) AS 'Total Student' FROM student;` and the result is a single row with the value 6.

	Total Student
1	6

19. Find maximum and minimum marks of students.

Query:
`SELECT MIN (marks) AS 'MIN Mark', MAX (marks) AS 'MAX Mark' FROM student;`

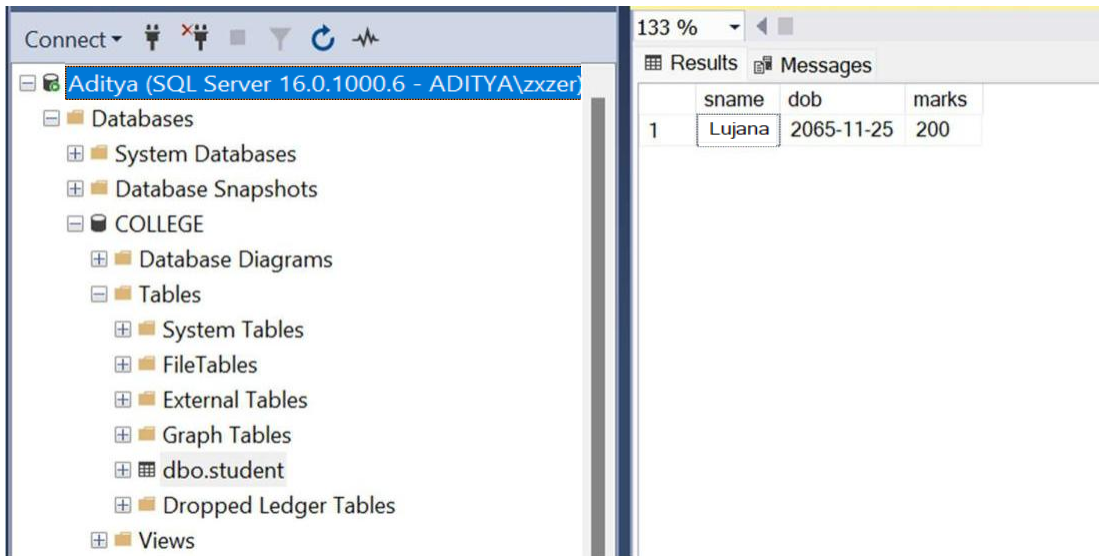


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. Under 'Tables', the 'dbo.student' table is selected. On the right, the 'Results' pane displays the output of the query. The query is `SELECT MIN (marks) AS 'MIN Mark', MAX (marks) AS 'MAX Mark' FROM student;` and the result is a single row with the values 105 and 200.

	MIN Mark	MAX Mark
1	105	200

20. Find name and dob of those students who get maximum marks.

```
Query: SELECT sname, dob, marks
FROM student
WHERE marks IN (SELECT MAX (marks)
FROM student);
```

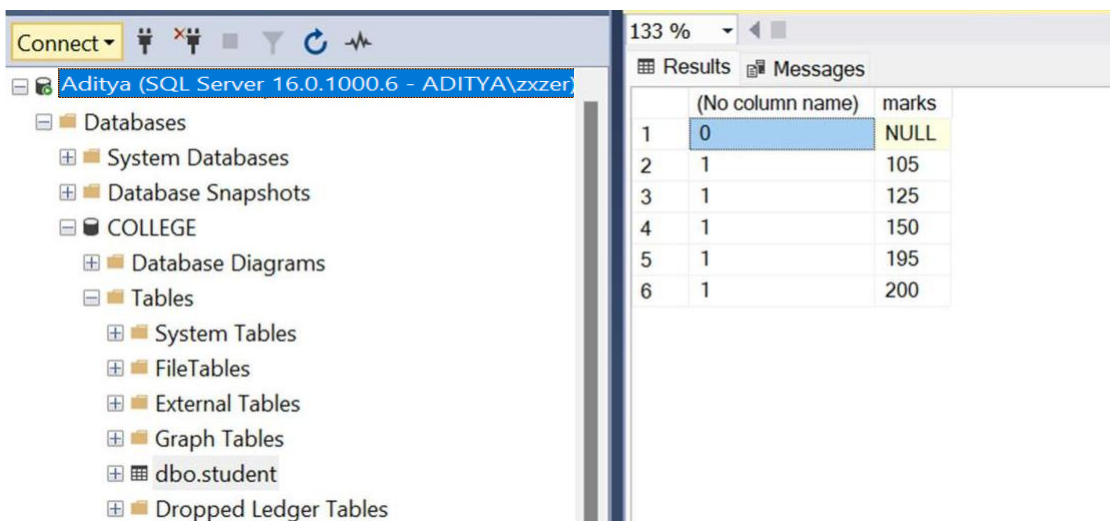


The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. Under 'Tables', the 'dbo.student' table is selected. On the right, the 'Results' pane displays the output of the query. The table has three columns: 'sname', 'dob', and 'marks'. The first row shows 'Lujana' with a date of birth '2065-11-25' and marks of '200'.

	sname	dob	marks
1	Lujana	2065-11-25	200

21. Display no of student with same Marks.

```
Query: SELECT COUNT (marks), marks
FROM student
GROUP BY (marks);
```



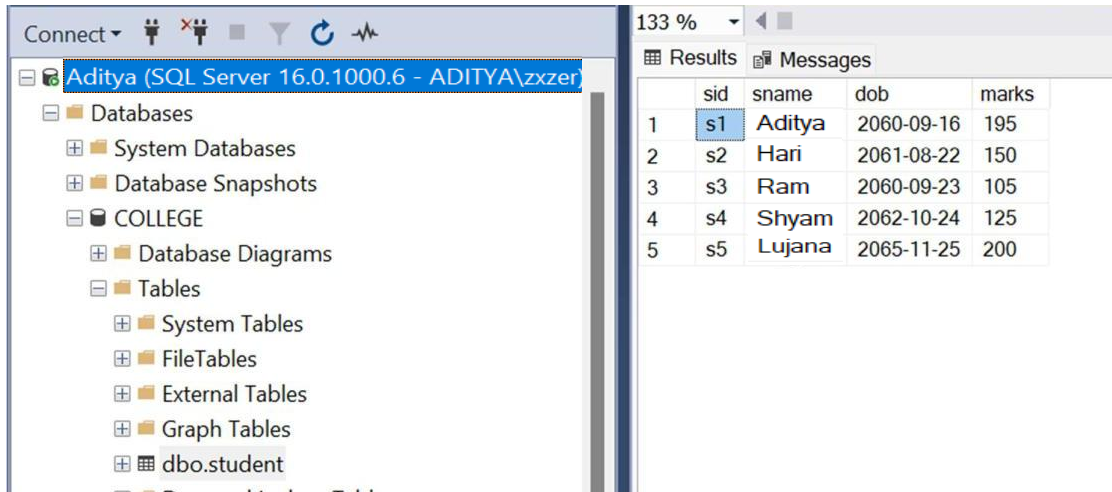
The screenshot shows the SQL Server Enterprise Manager interface. On the left, the 'Databases' folder is expanded, showing the 'COLLEGE' database. Under 'Tables', the 'dbo.student' table is selected. On the right, the 'Results' pane displays the output of the query. The table has two columns: '(No column name)' and 'marks'. The first row shows '0' for the count and 'NULL' for the marks. The subsequent rows show counts of 1 for marks of 105, 125, 150, 195, and 200.



	(No column name)	marks
1	0	NULL
2	1	105
3	1	125
4	1	150
5	1	195
6	1	200

22. Increase marks of all student by 40% of name start with 's'

Query: UPDATE student
SET marks = marks + marks * 0.4
WHERE sname LIKE 'S%';

Before Update:



Connect ▾  133 % ▾ 

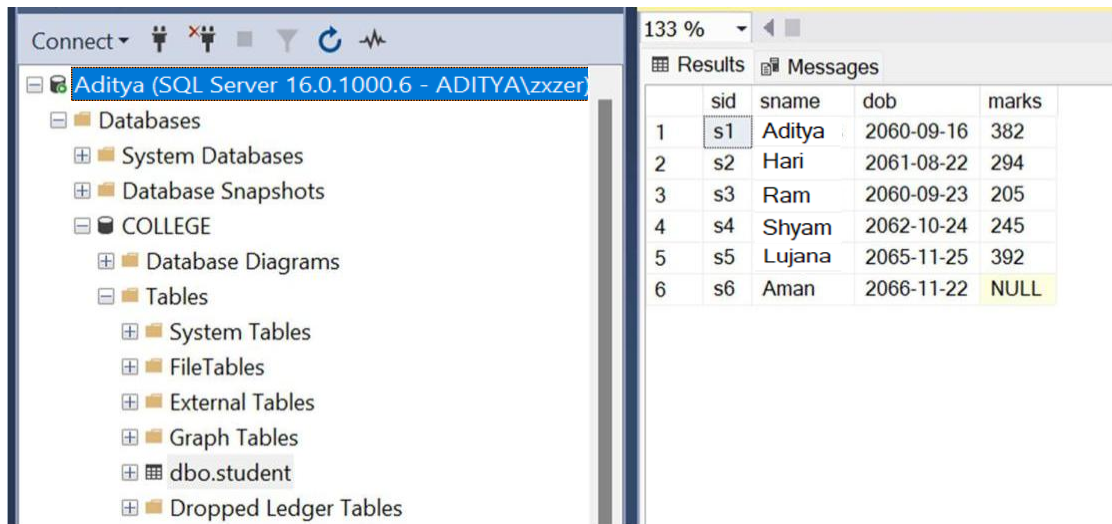
Results Messages

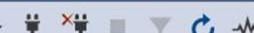

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	195
2	s2	Hari	2061-08-22	150
3	s3	Ram	2060-09-23	105
4	s4	Shyam	2062-10-24	125
5	s5	Lujana	2065-11-25	200

Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)

- Databases
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After Update:



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Results Messages

	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	382
2	s2	Hari	2061-08-22	294
3	s3	Ram	2060-09-23	205
4	s4	Shyam	2062-10-24	245
5	s5	Lujana	2065-11-25	392
6	s6	Aman	2066-11-22	NULL

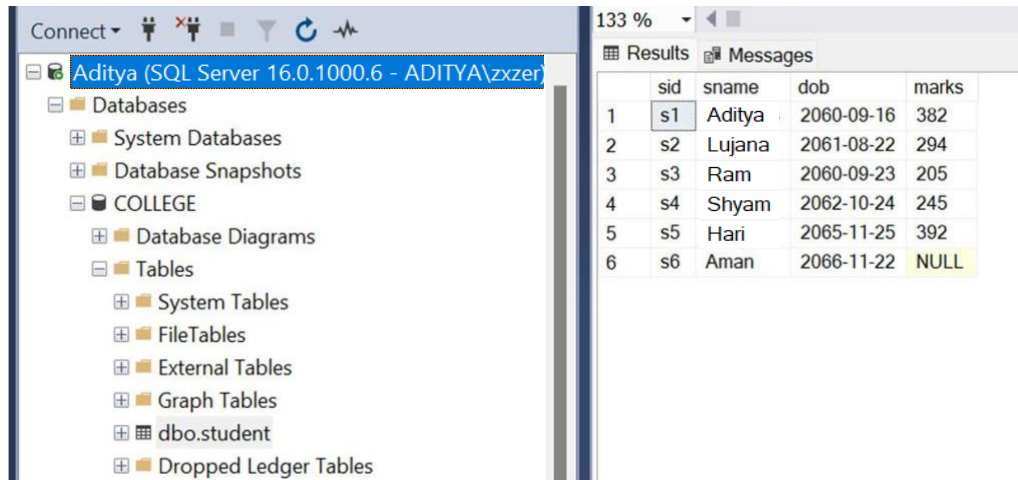
Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)

- Databases
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 - dbo.student
 - Dropped Ledger Tables

23.Delete record of all student with marks less than 220.

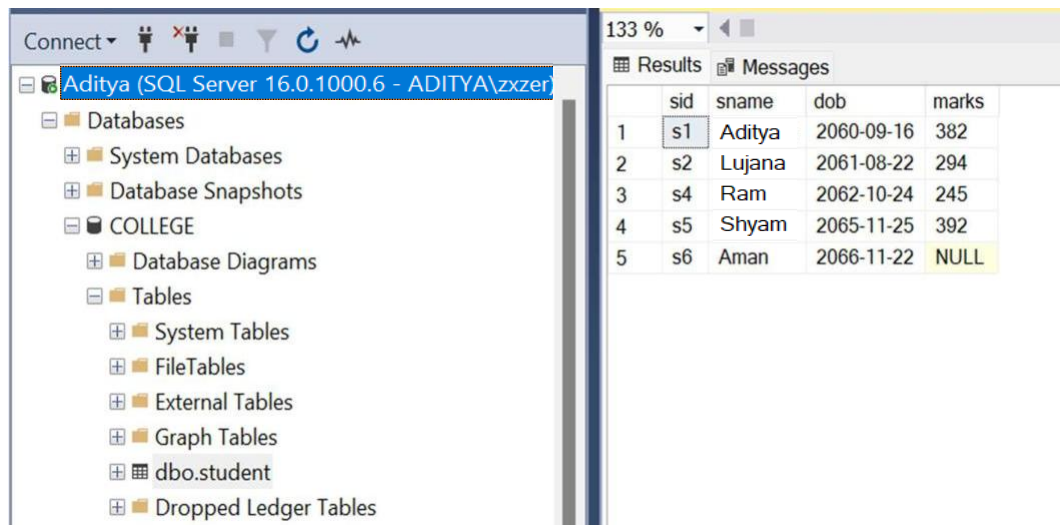
Query: DELETE FROM student
WHERE (marks) < 220;

Before:



	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	382
2	s2	Lujana	2061-08-22	294
3	s3	Ram	2060-09-23	205
4	s4	Shyam	2062-10-24	245
5	s5	Hari	2065-11-25	392
6	s6	Aman	2066-11-22	NULL

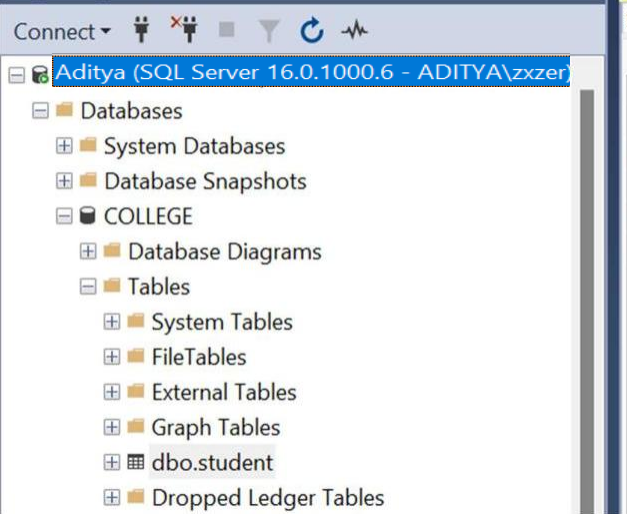
After:



	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	382
2	s2	Lujana	2061-08-22	294
3	s4	Ram	2062-10-24	245
4	s5	Shyam	2065-11-25	392
5	s6	Aman	2066-11-22	NULL

24.Insert new attribute address to the student table.

Query: ALTER TABLE student
ADD Address VARCHAR (20);

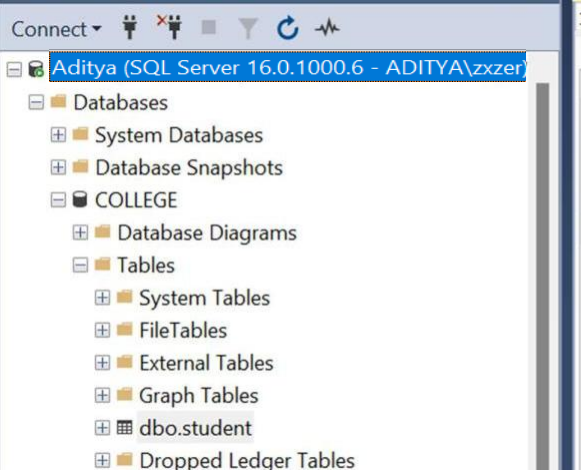


	sid	sname	dob	marks	Address
1	s1	Aditya	2060-09-16	382	NULL
2	s2	Lujana	2061-08-22	294	NULL
3	s4	Ram	2062-10-24	245	NULL
4	s5	Shyam	2065-11-25	392	NULL
5	s6	Aman	2066-11-22	NULL	NULL

25.Remove address attribute from student table.

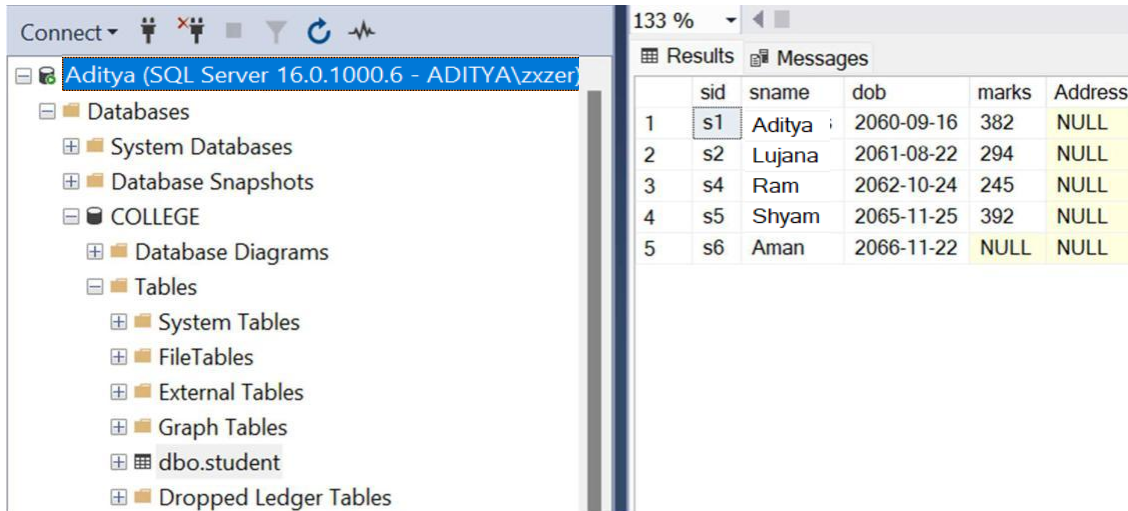
Query: ALTER TABLE student
DROP COLUMN Address;

Before:



	sid	sname	dob	marks	Address
1	s1	Aditya	2060-09-16	382	NULL
2	s2	Lujana	2061-08-22	294	NULL
3	s4	Ram	2062-10-24	245	NULL
4	s5	Shyam	2065-11-25	392	NULL
5	s6	Aman	2066-11-22	NULL	NULL

After:

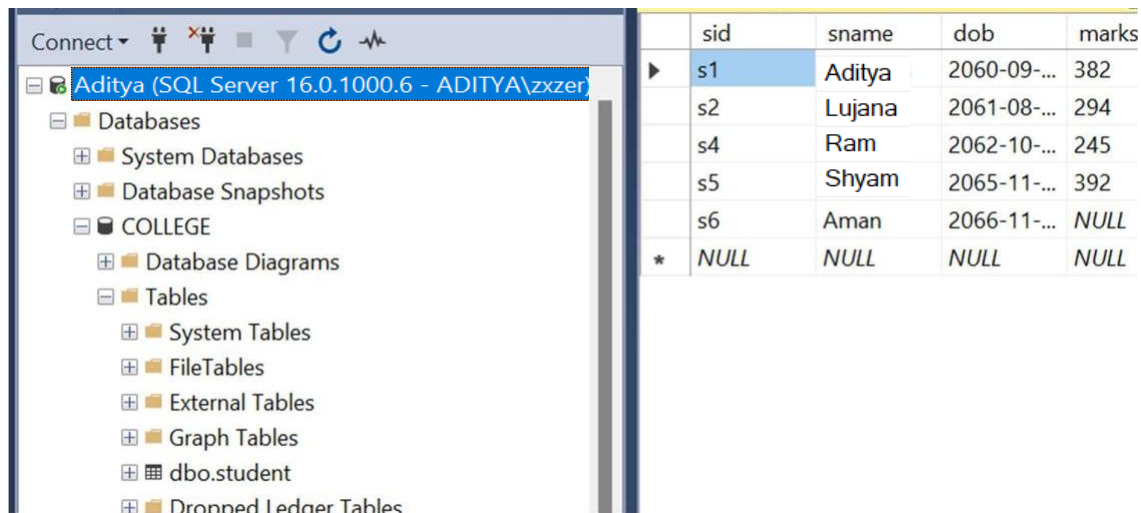


	sid	sname	dob	marks	Address
1	s1	Aditya	2060-09-16	382	NULL
2	s2	Lujana	2061-08-22	294	NULL
3	s4	Ram	2062-10-24	245	NULL
4	s5	Shyam	2065-11-25	392	NULL
5	s6	Aman	2066-11-22	NULL	NULL

27. Rename the sname attribute to 'First Name'.

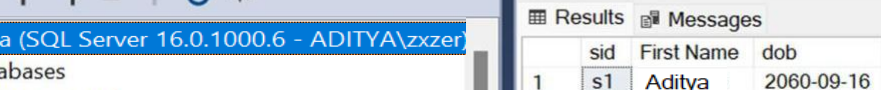
Query: EXEC sp_rename 'student. sname','First Name';







Before:



	sid	sname	dob	marks
▶	s1	Aditya	2060-09-...	382
	s2	Lujana	2061-08-...	294
	s4	Ram	2062-10-...	245
	s5	Shyam	2065-11-...	392
	s6	Aman	2066-11-...	NULL
*	NULL	NULL	NULL	NULL

After:



Connect      

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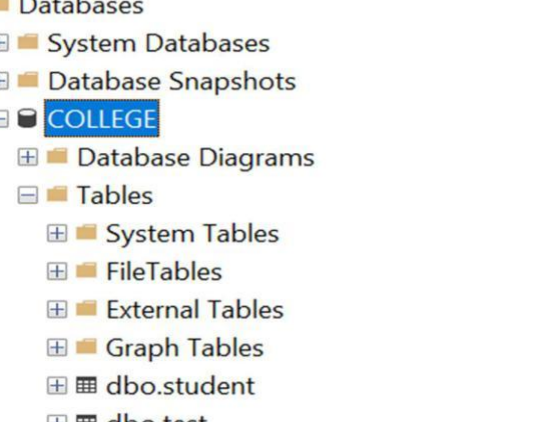
Results Messages

	sid	First Name	dob	marks
1	s1	Aditya	2060-09-16	382
2	s2	Lujana	2061-08-22	294
3	s4	Ram	2062-10-24	245
4	s5	Shyam	2065-11-25	392
5	s6	Aman	2066-11-22	NULL

28.Delete table named 'Test' from database.

Query: DROP TABLE Players;

Before:



The screenshot shows the SQL Server Enterprise Manager interface. The left-hand tree view is expanded to show the 'COLLEGE' database. The tree structure is as follows:

- Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)
 - Databases
 - System Databases
 - Database Snapshots
 - COLLEGE** (selected)
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.student
 - dbo.test
 - Dropped Ledger Tables

After:

- Aditya (SQL Server 16.0.1000.6 - ADITYA\zxzer)
- Databases
 - System Databases
 - Database Snapshots
 - COLLEGE
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.student
 - Dropped Ledger Tables

