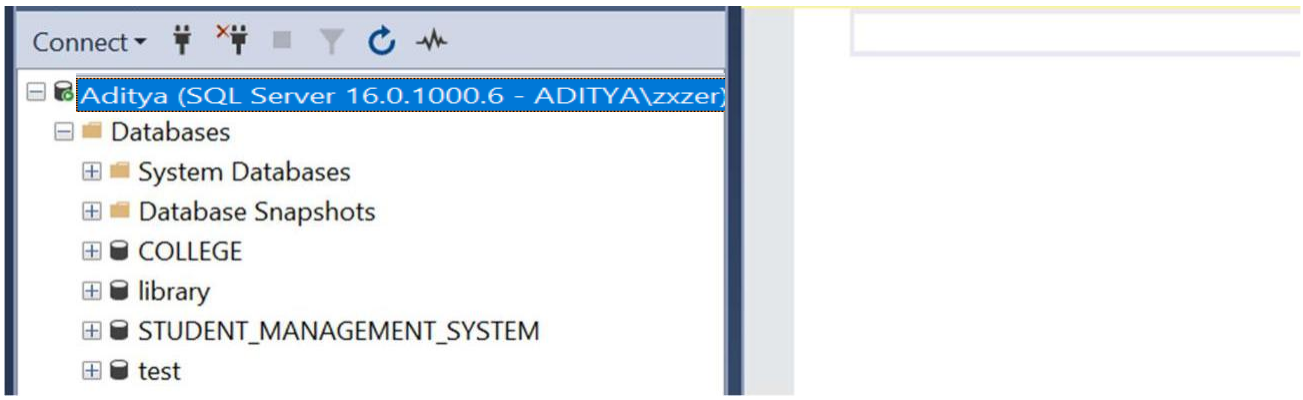
Lab-1: Use of Single Table

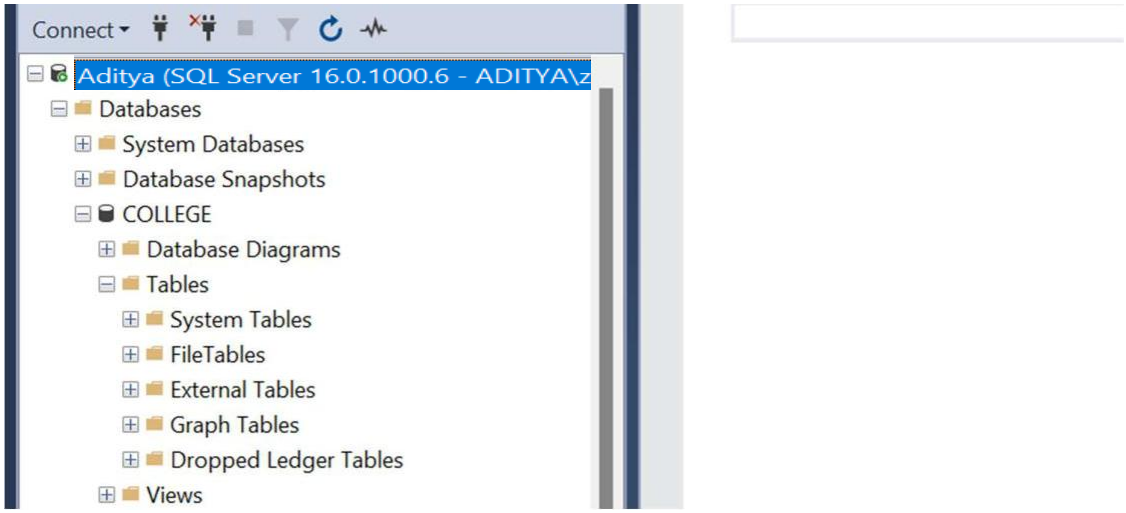
1. Creating Database:

Query: CREATE DATABASE College;



2. Creating Table:

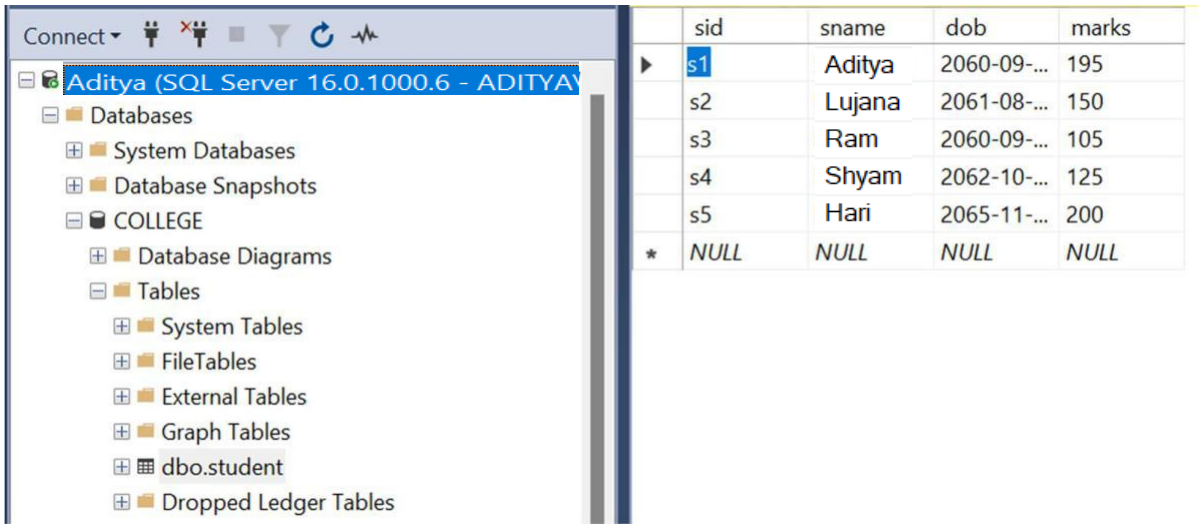
Query: CREATE TABLE Student (Sid VARCHAR (5) PRIMARY KEY,
sname VARCHAR (20),
dob DATE,
marks INT);



3. Data Insertion Through Query:

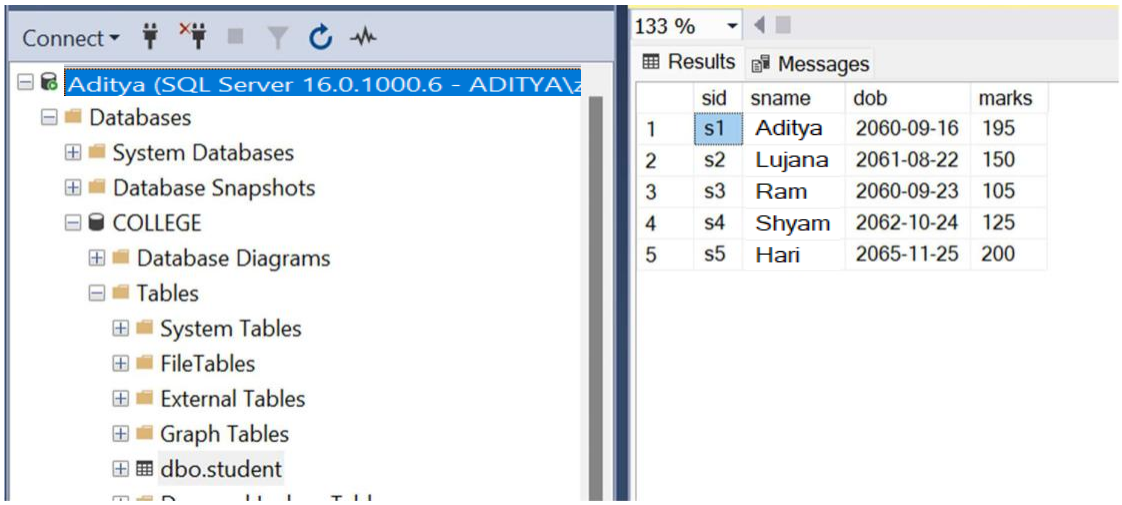
Query: VALUES ('s1', Aditya,'2060-09-16',195), ('s2',
Lujana,'2061-08-22',150), ('s3',
Ram,'2060-09-23',105), ('s4',
Shyam,'2062-10-24',125), ('s5',
Hari,'2065-11-25',200);

Data Insertion Through GUI:



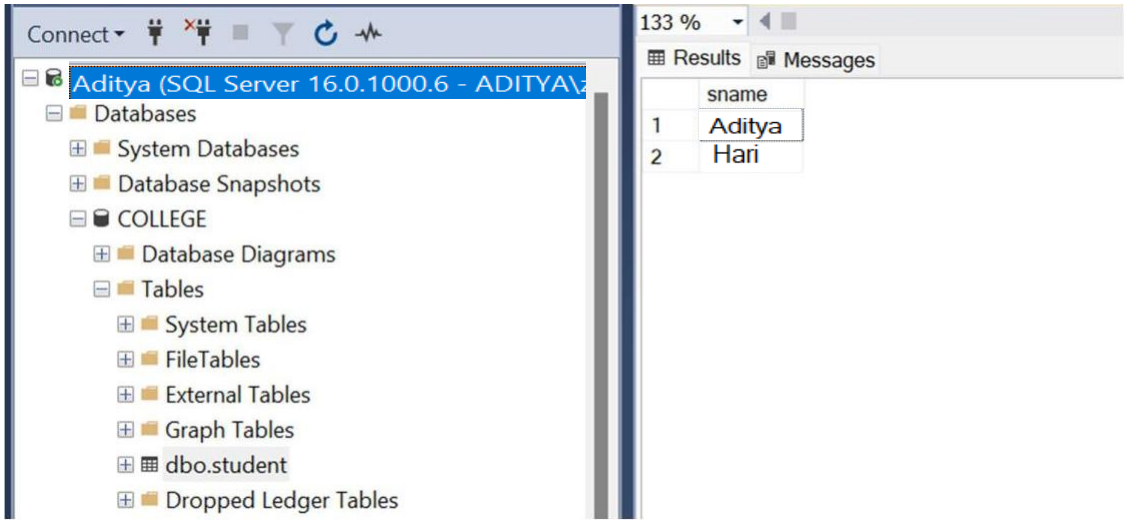
4. Display Complete Table:

Query: SELECT *
FROM student;



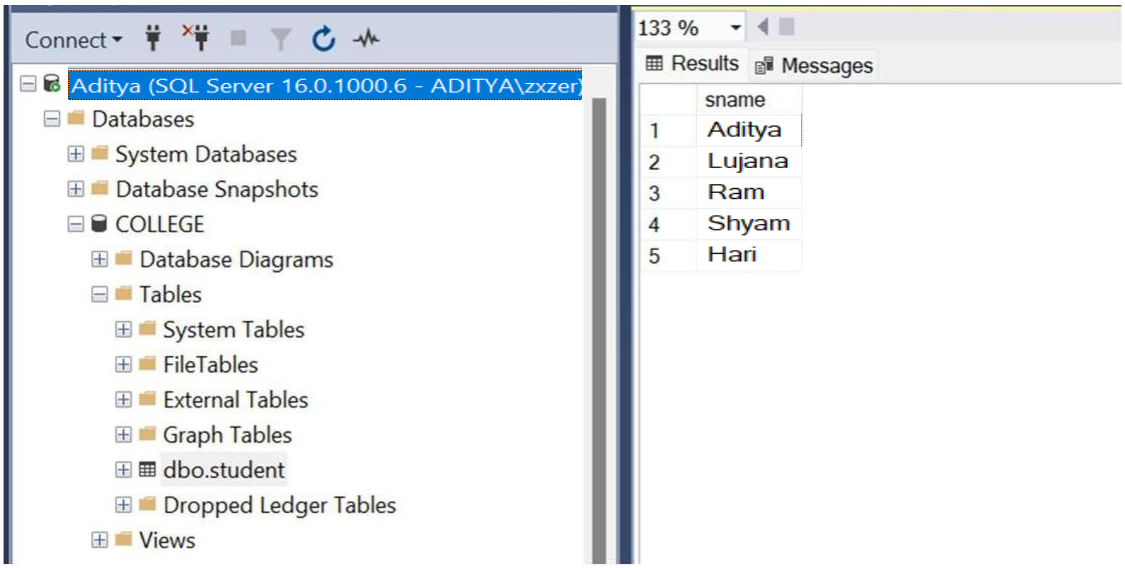
5. Display Selected Data:

Query: SELECT sname
FROM student WHERE marks > 150;



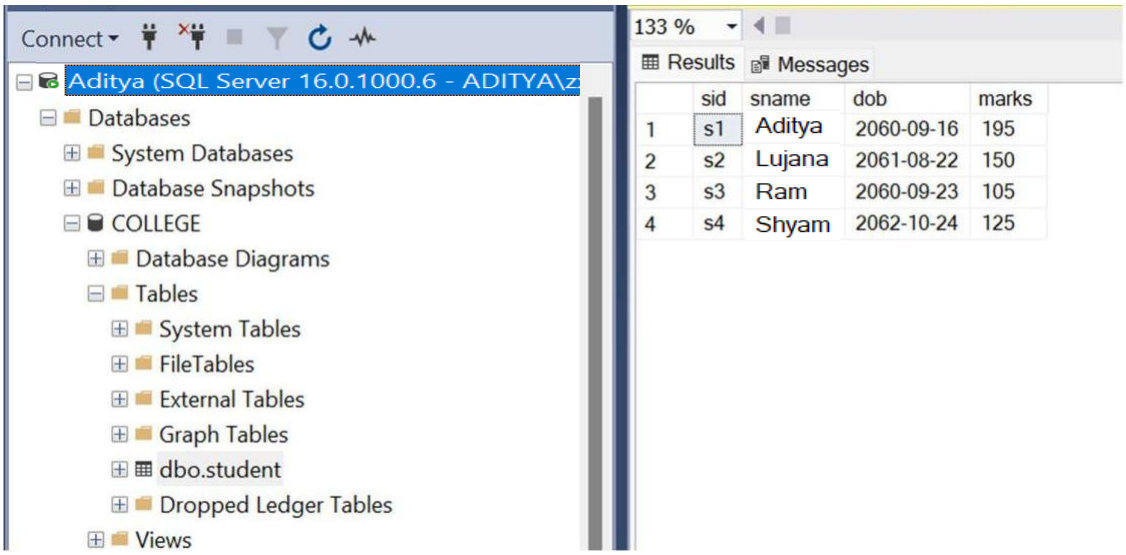
6.Display name of all students of marks not equal to 200 or of dob less than ‘2070-01-01’.

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



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

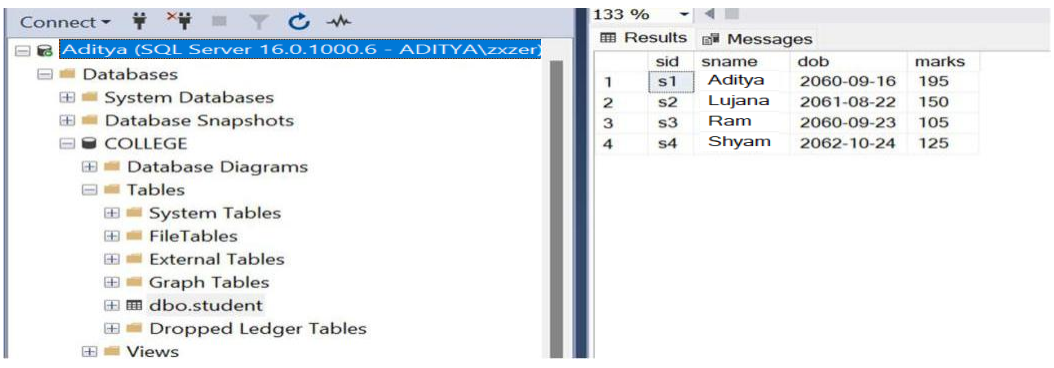
Query:
```
SELECT *
FROM student
WHERE marks IN (190,200,180,220,199);
                Or
SELECT *
FROM student
WHERE marks =190 OR marks=200 OR marks=180 OR
marks=220 OR marks=199;
```



	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.

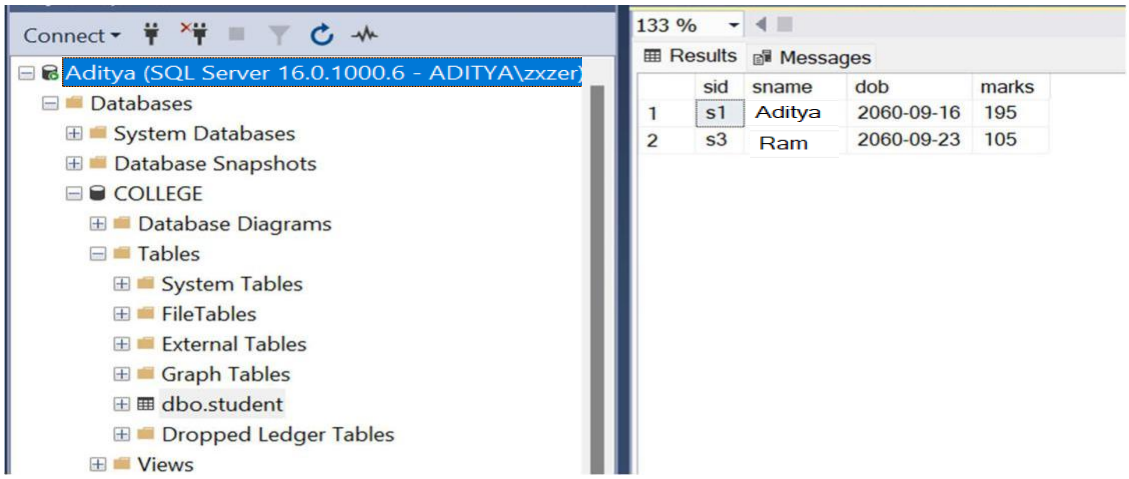
Query:
```
SELECT *
FROM student
WHERE marks NOT
                IN(190,200,180,220,199); Or
SELECT *
FROM student
WHERE marks < > 190 AND marks < > 200 AND marks < >180
AND marks < > 220 AND marks < > 199.
```



	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

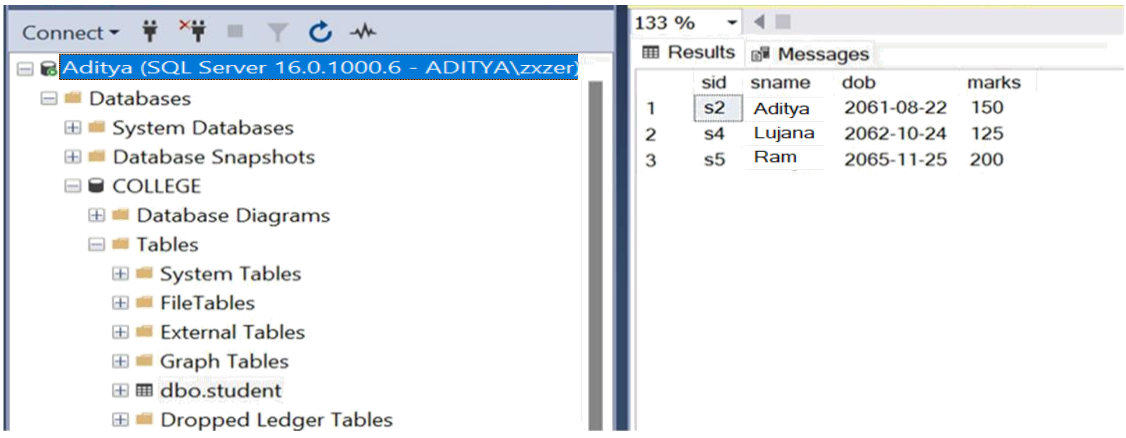
9. Display all students of dob between ‘2050-01-01’ and ‘2061-01-01’ .

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’ ;
```



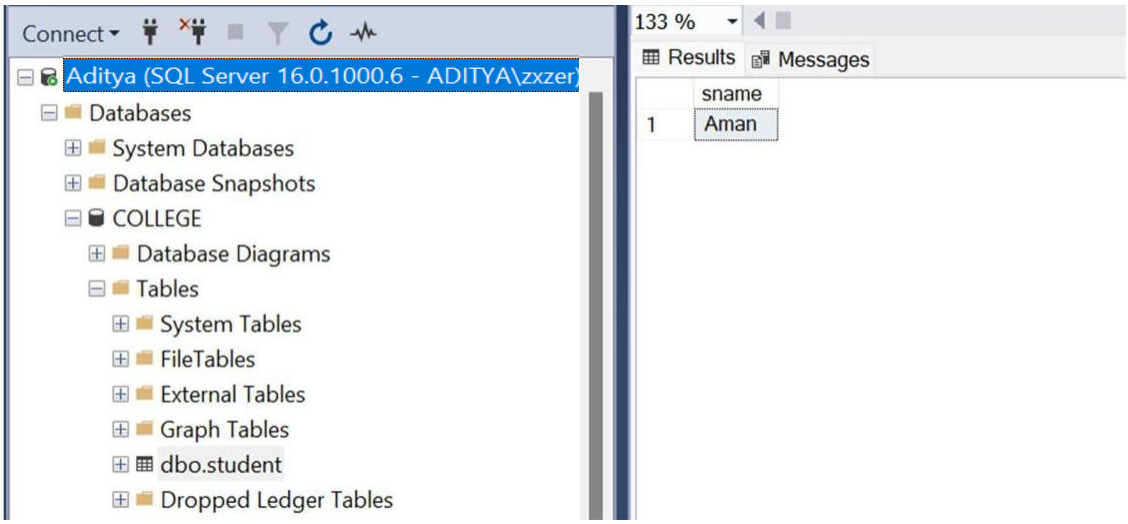
10.Display all students of dob not between ‘2050-01-01’ and ‘2061-01-01’.

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’;
```

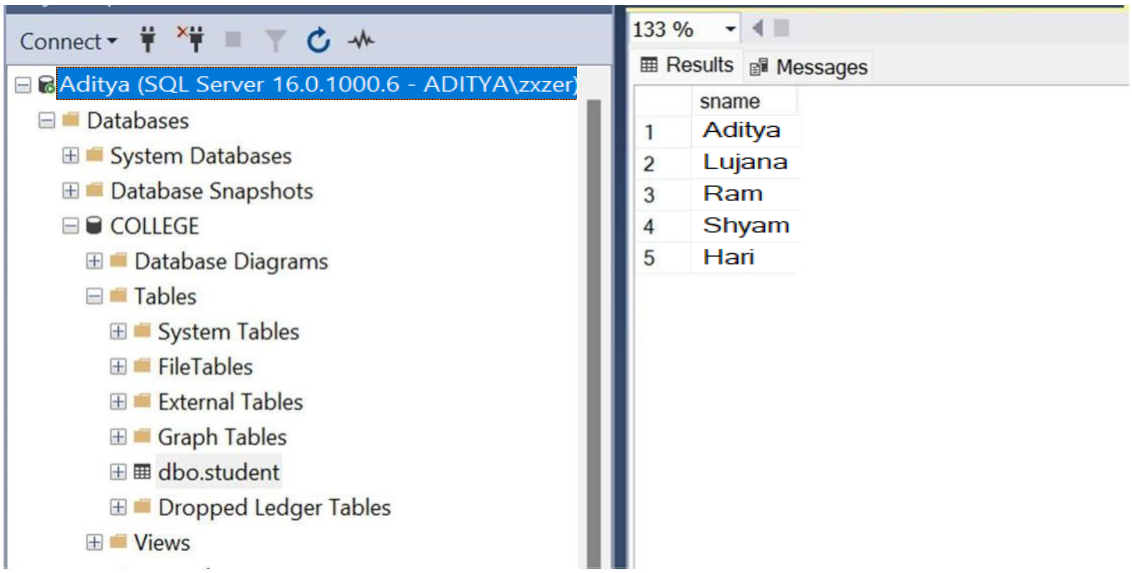


11. Display name of all students whose marks is Null and Not Null.

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

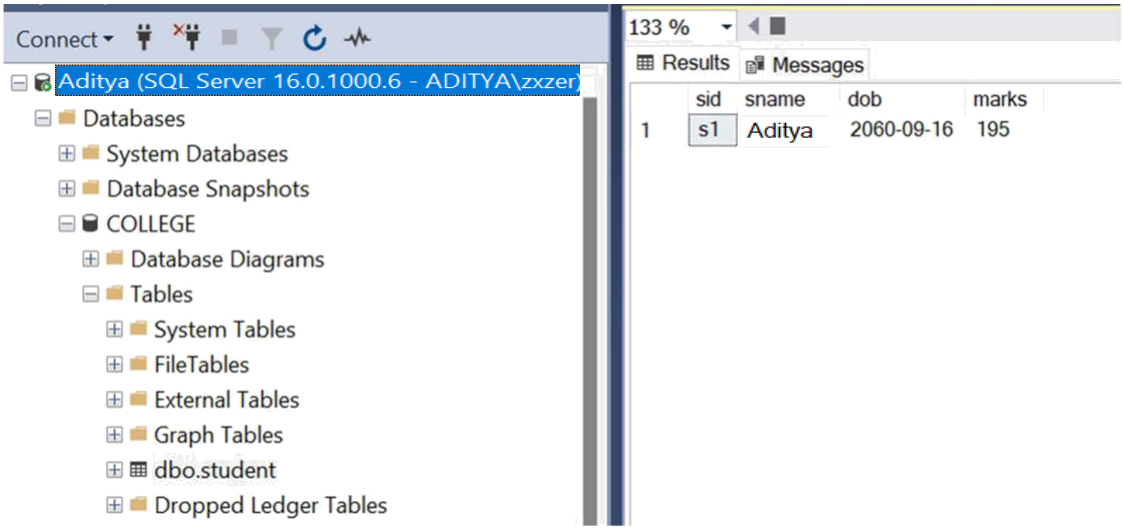


Query for Not Null:
```
SELECT sname
FROM student
WHERE marks IS NOT NULL;
```



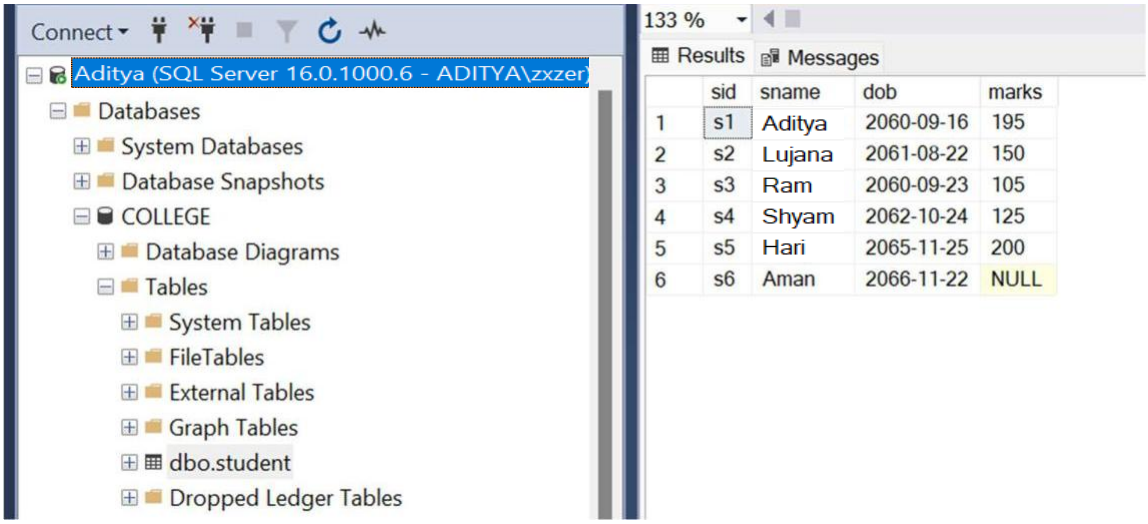
12. Display records of all students whose name contains ‘u’ as substring and dob is less than ‘2065-01-05’.

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



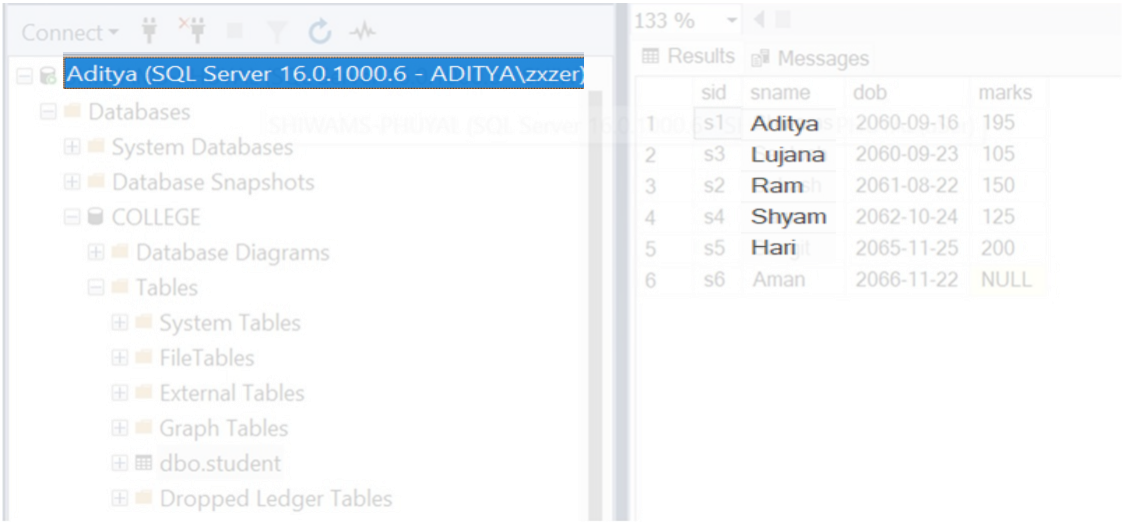
13.Display records of all students whose name length is not equal to 5.

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



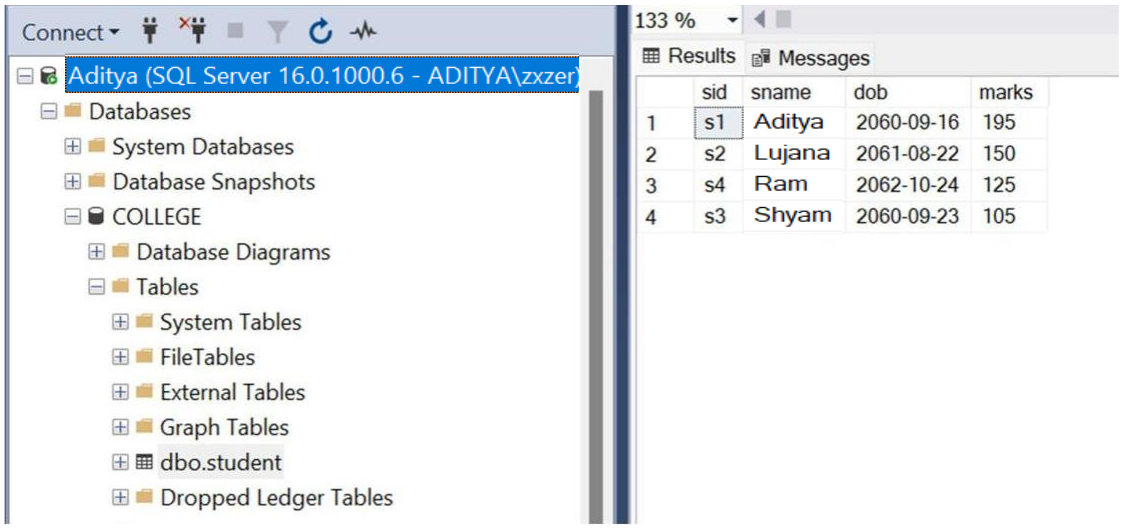
14.Display records of all students in ascending order of their dob.

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



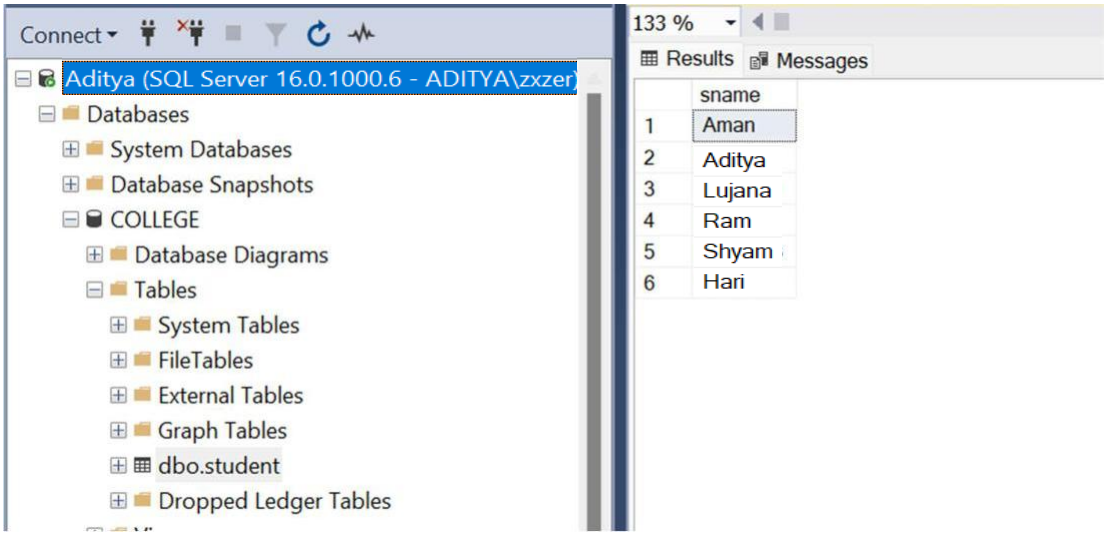
15. Display records of all students of marks less than 200 and arrange the data in descending order of their marks.

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



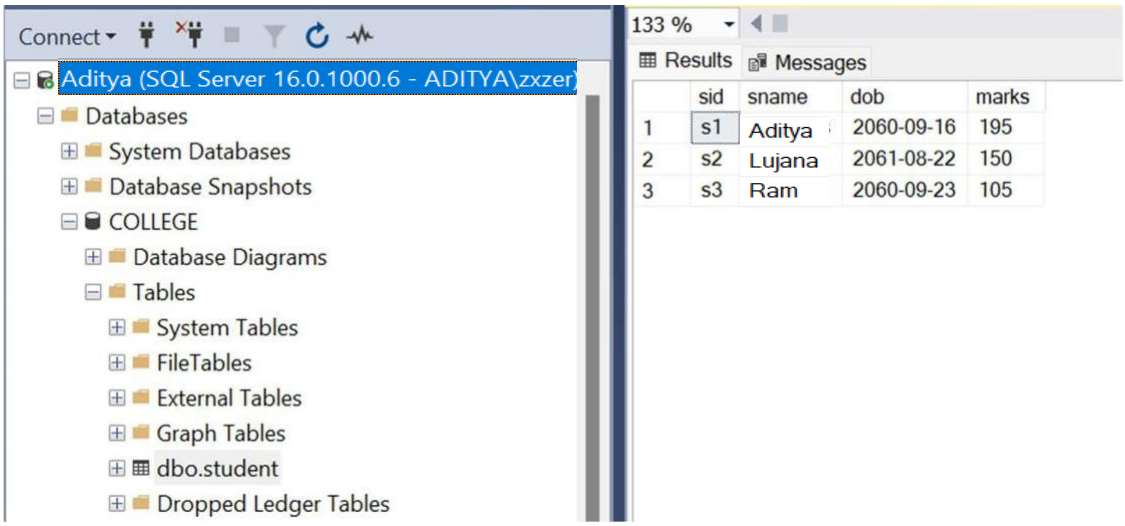
16. Display records of all students by displaying unique names.

Query: SELECT DISTINCT (sname)
FROM student;



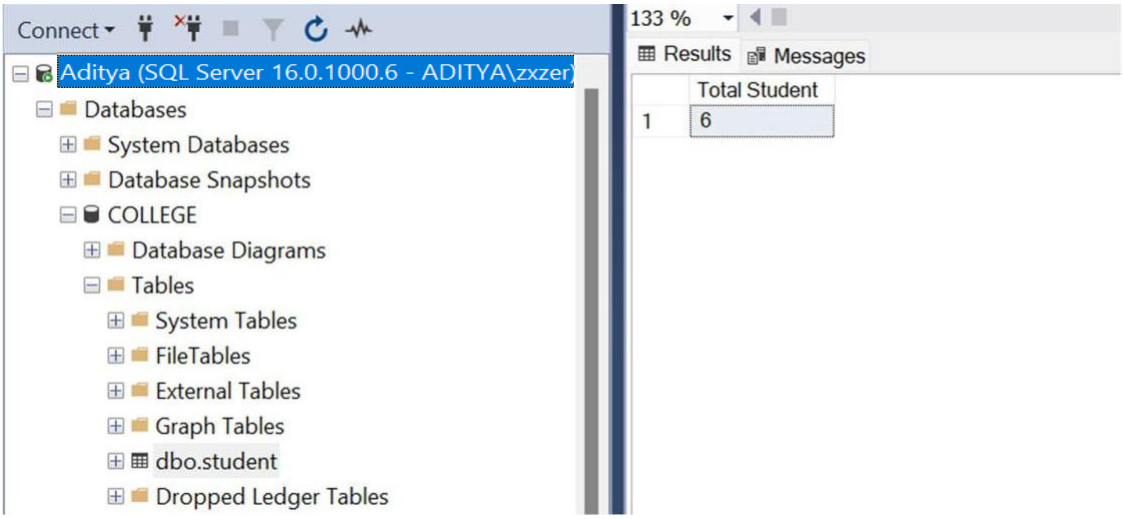
17. Display top 3 records of student.

Query: Select TOP (3) *
From student;



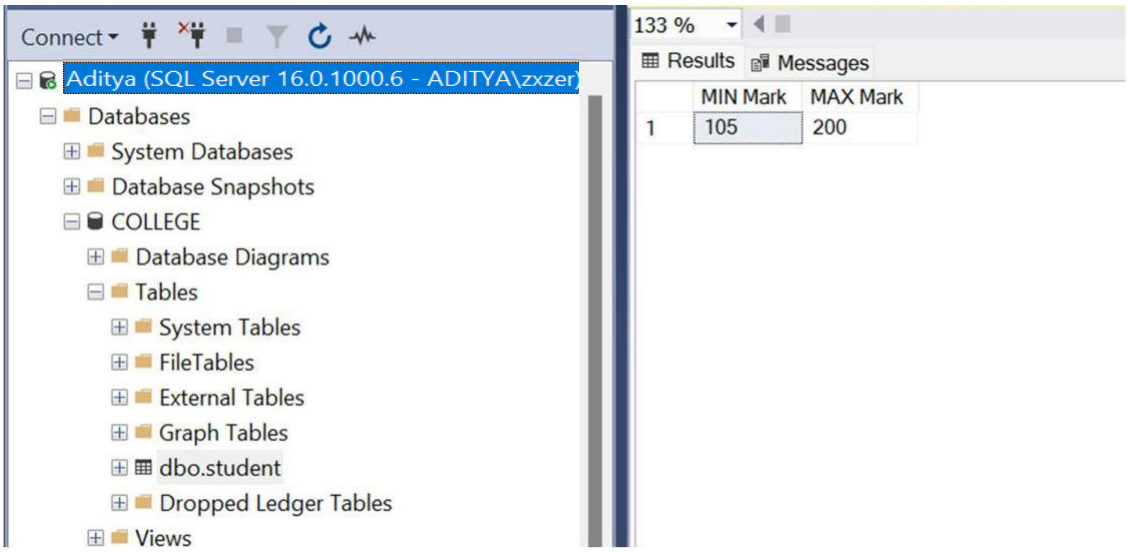
18.Find total no of students.

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



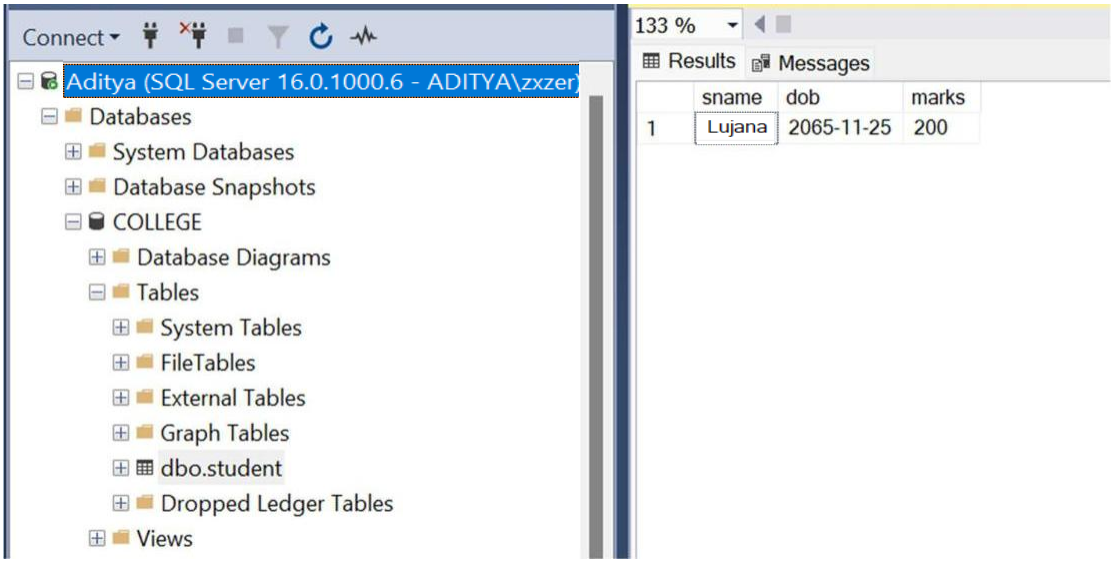
19.Find maximum and minimum marks of students.

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



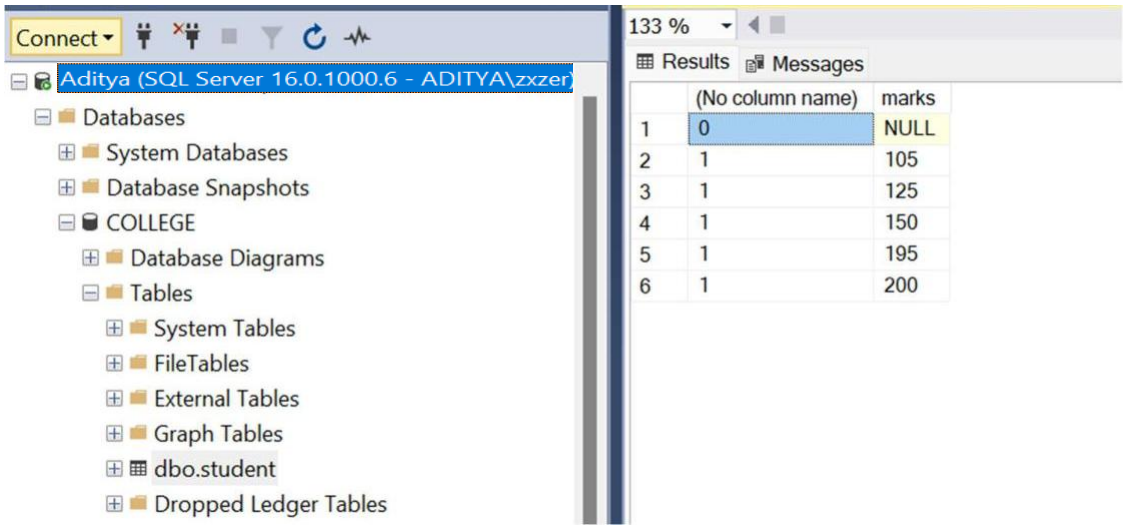
20.Find name and dob of those students who get maximum marks.

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



21.Display no of student with same Marks.

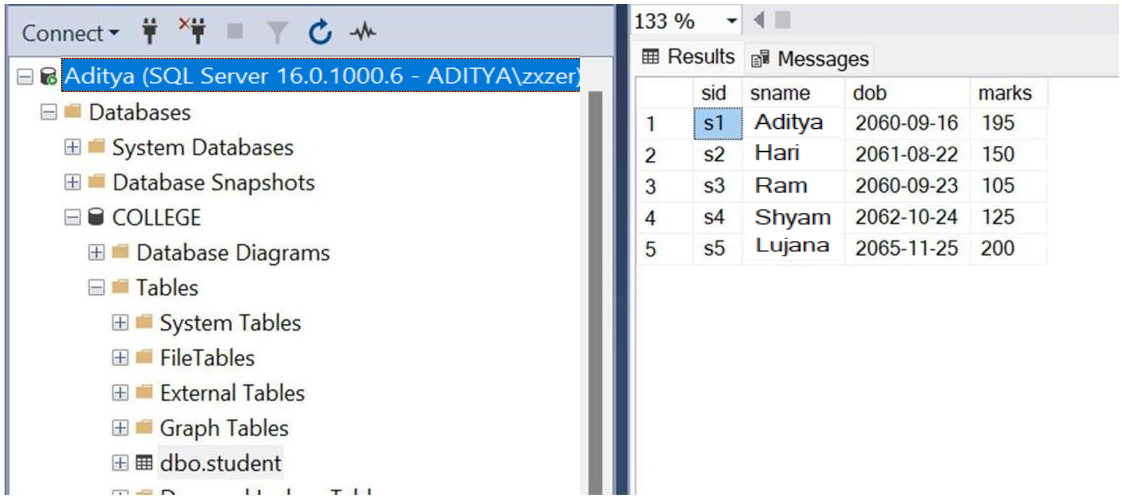
Query: SELECT COUNT (marks), marks
FROM student
GROUP BY (marks);



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

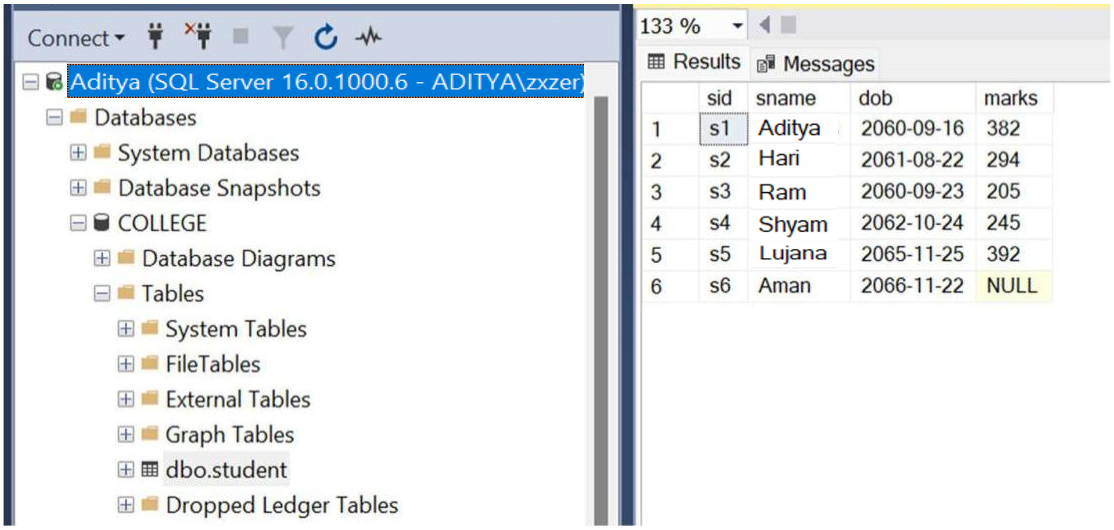
Query: UPDATE student
SET marks = marks + marks *0.4
WHERE sname LIKE 'S%';

Before Update:



	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

After Update:

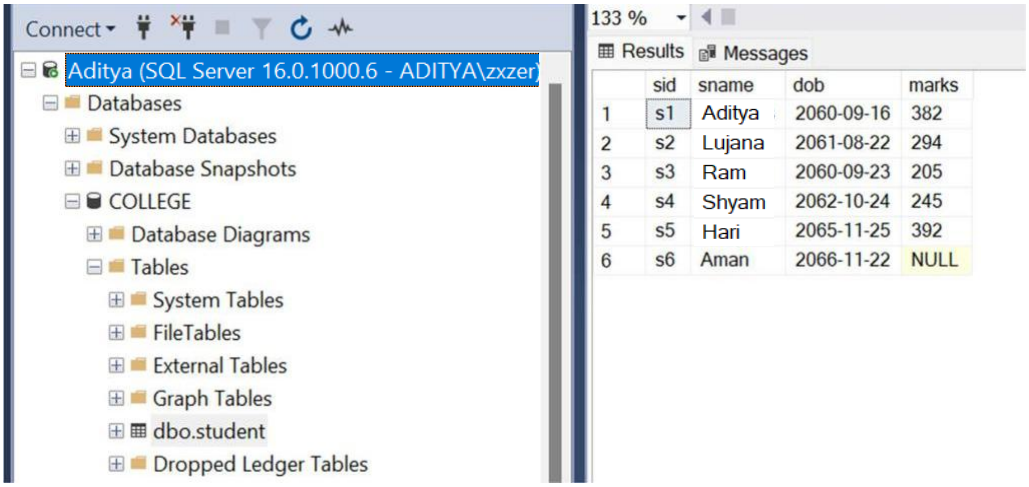


	sid	sname	dob	marks
1	s1	Aditya	2060-09-16	382
2	s2	Hari	2061-08-22	294
3	s3	Ram	2060-09-23	205
4	s4	Shyam	2062-10-24	245
5	s5	Lujana	2065-11-25	392
6	s6	Aman	2066-11-22	NULL

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

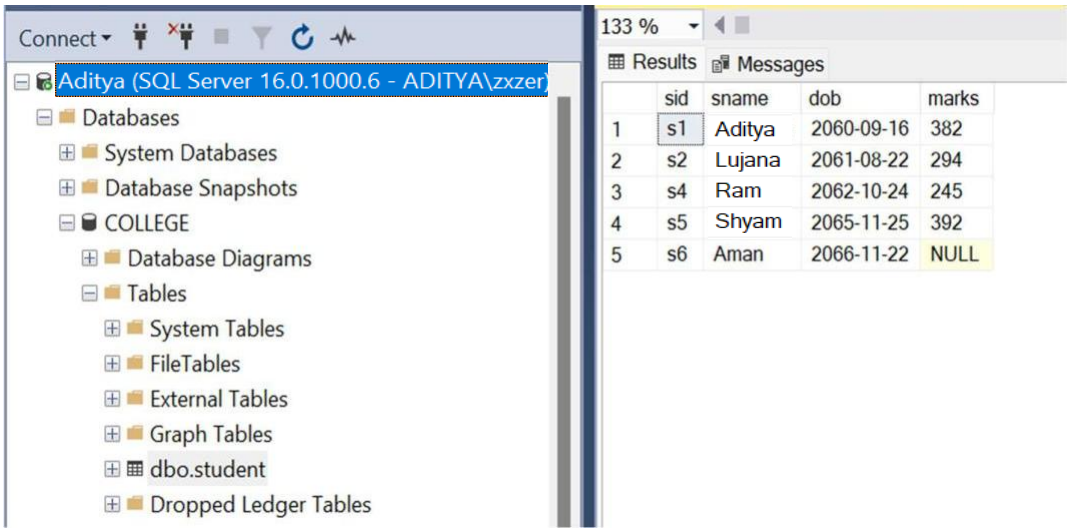
Query: DELETE FROM student
WHERE (marks) < 220;

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

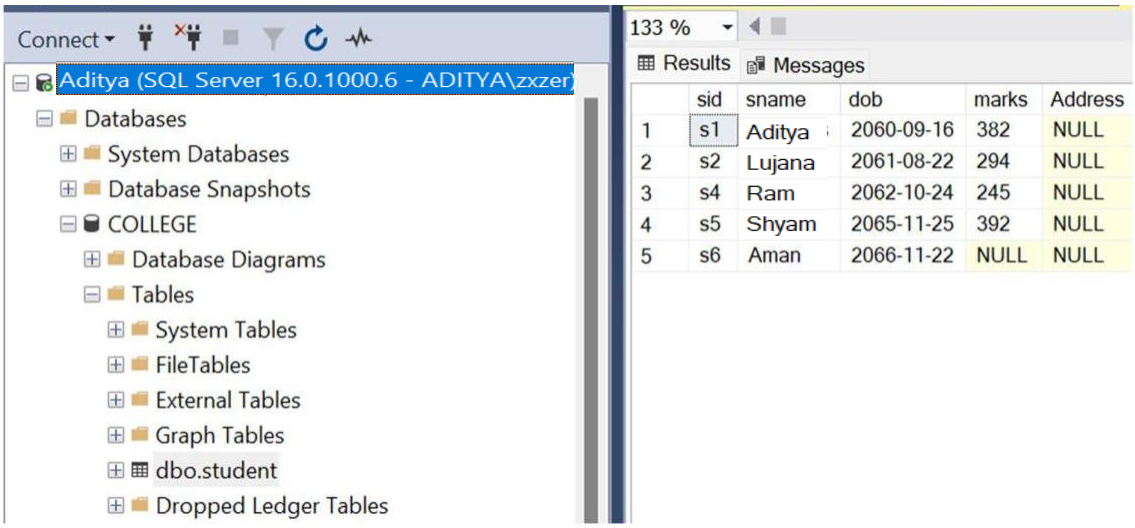
After:



	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);

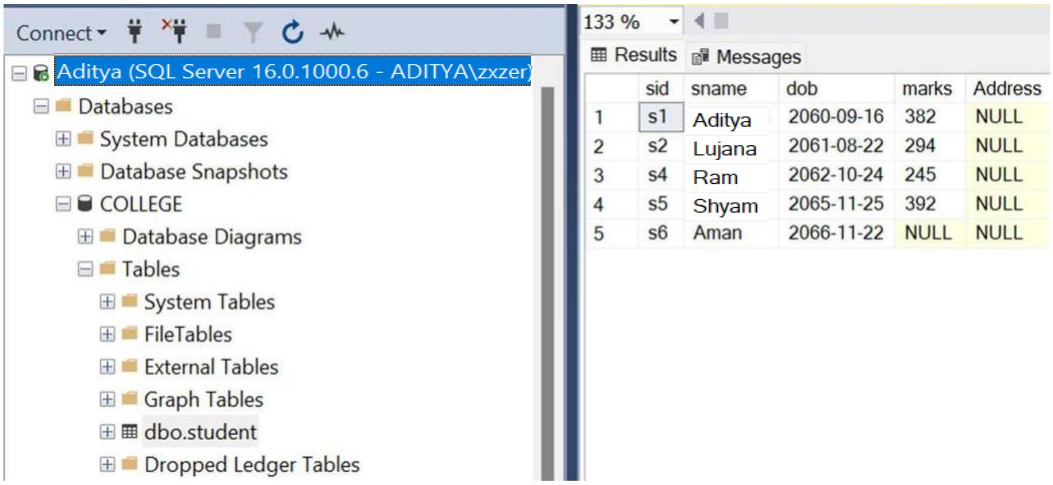


	sid	sname	dob	marks	Address
1	s1	Aditya	2060-09-16	382	NULL
2	s2	Lujana	2061-08-22	294	NULL
3	s4	Ram	2062-10-24	245	NULL
4	s5	Shyam	2065-11-25	392	NULL
5	s6	Aman	2066-11-22	NULL	NULL

25.Remove address attribute from student table.

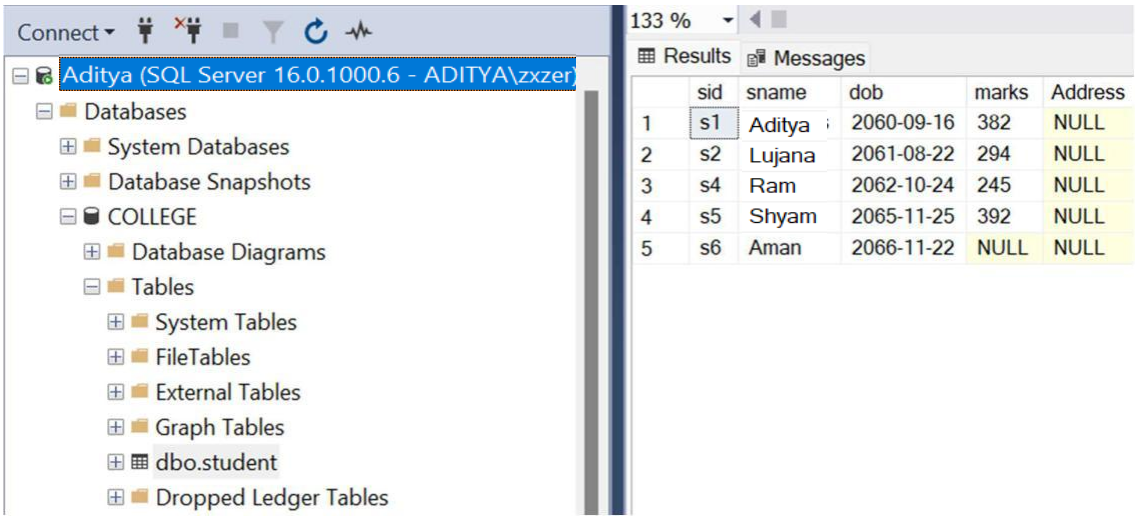
Query: ALTER TABLE student
DROP COLUMN Address;

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:

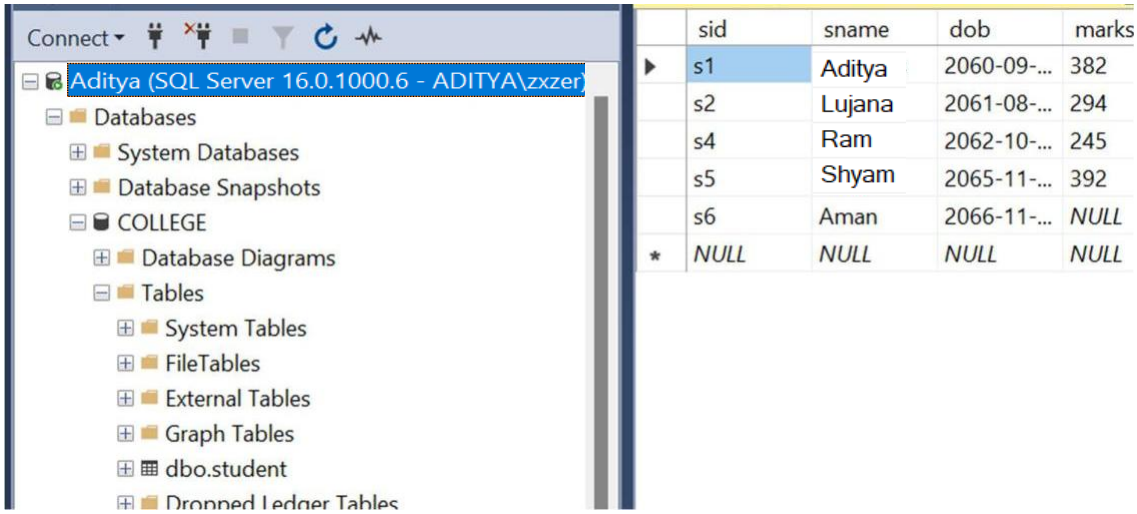


	sid	sname	dob	marks	Address
1	s1	Aditya	2060-09-16	382	NULL
2	s2	Lujana	2061-08-22	294	NULL
3	s4	Ram	2062-10-24	245	NULL
4	s5	Shyam	2065-11-25	392	NULL
5	s6	Aman	2066-11-22	NULL	NULL

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

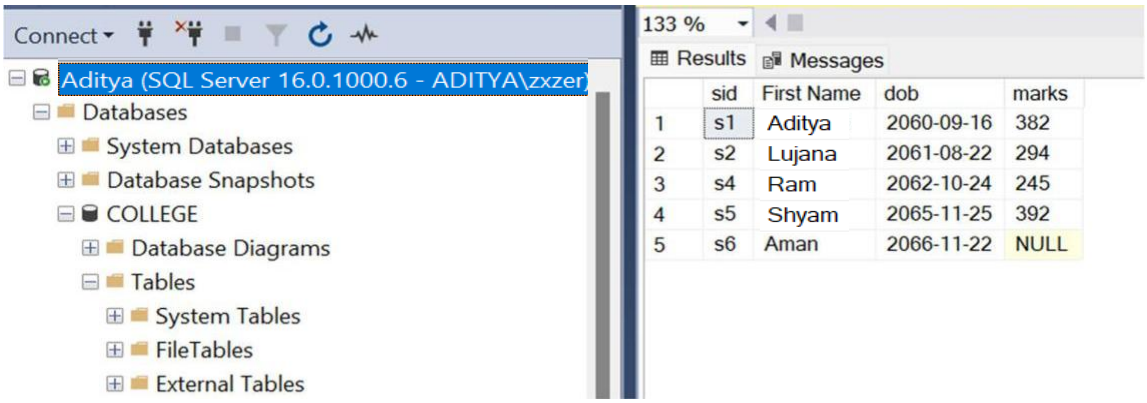
Query: EXEC sp_rename 'student. sname','First Name';

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*

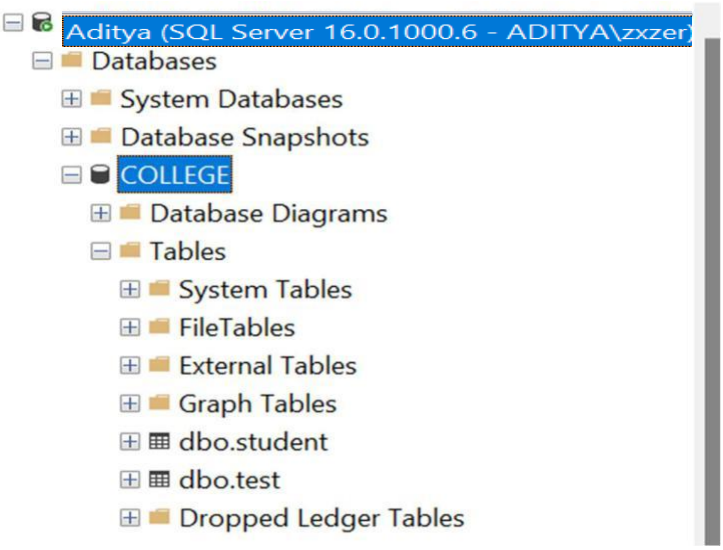
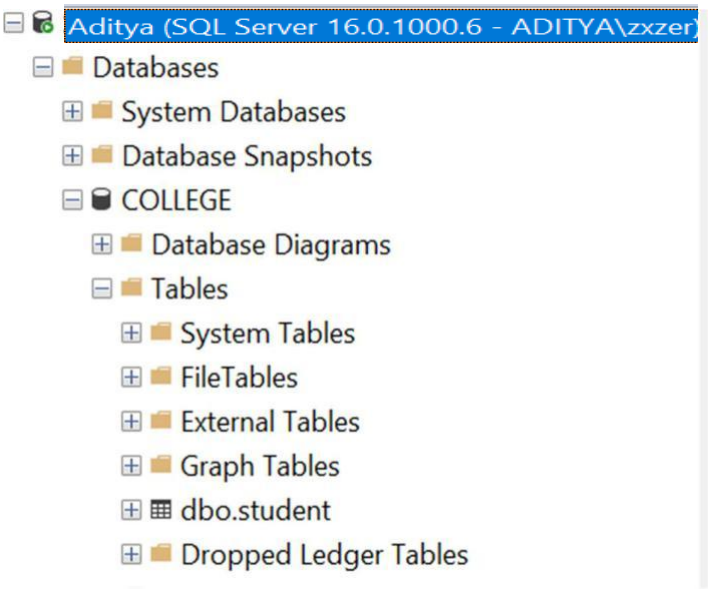
After:



28.Delete table named 'Test' from database.

Query: DROP TABLE Players;

Before:



After: