

Assignment 5

201001001013

1. Drop and create Student and Department tables. Don't create Primary key, unique key or foreign key constraints on the tables now.

```
DROP TABLE STUDENT;  
DROP TABLE DEPARTMENT;
```

2. Create clustered index on studentId column of Student table

```
CREATE CLUSTERED INDEX cls_stu ON student(student_id);
```

3. Create unique clustered index on deptId column of Department table

```
CREATE UNIQUE CLUSTERED INDEX cls_dep ON department(deptid);
```

4. Create a nonclustered index on name, address columns of Student table only for the students whose address is Kolkata.

```
CREATE NONCLUSTERED INDEX ncls_stu ON student(stu_name ASC, stu_address ASC)  
WHERE stu_address = 'KOLKATA';
```

5. Drop and recreate the nonclustered index. Email and phone columns should be added as included columns.

```
DROP INDEX ncls_stu ON student;  
CREATE NONCLUSTERED INDEX ncls_stu ON student(stu_name ASC, stu_address ASC)  
INCLUDE(email, phone)  
WHERE stu_address = 'KOLKATA';
```

6. Insert 10 records in Student table and 4 records in Department table.

```
INSERT INTO STUDENT  
VALUES('101', 'Shivam', 'Kolkata', '9900990099', 'shivam@gmail.com', '2001-06-13', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10111', '410');  
INSERT INTO STUDENT  
VALUES('102', 'Rishav', 'Gaya', '9900990099', 'rishav@gmail.com', '2002-03-11', '2020-07-21', '2024-06-20', 'Kolkata', '1002', '1210', '15310', '210');  
INSERT INTO STUDENT  
VALUES('103', 'Satyam', 'Newtown', '9900990099', 'satyam@gmail.com', '2002-06-19', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10111', '115');  
INSERT INTO STUDENT  
VALUES('104', 'Sameer', 'Kolkata', '9900990099', 'sameer@gmail.com', '2001-09-03', '2020-07-21', '2024-06-20', 'Kolkata', '1006', '1240', '10310', '315');  
INSERT INTO STUDENT  
VALUES('121', 'Rahul', 'Kolkata', '9900990099', 'rahul@gmail.com', '2002-11-16', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10410', '410');  
INSERT INTO STUDENT  
VALUES('124', 'Raunak', 'Patna', '9900990099', 'raunak@gmail.com', '2001-05-23', '2020-07-21', '2024-06-20', 'Kolkata', '1002', '1210', '15310', '410');  
INSERT INTO STUDENT  
VALUES('132', 'Rajeev', 'DumDum', '9900990099', 'rajeev@gmail.com', '2002-07-29', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10410', '115');  
INSERT INTO STUDENT  
VALUES('139', 'Shorab', 'Park Street', '9900990099', 'shorab@gmail.com', '2002-10-09', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10111', '115');
```

```

INSERT INTO STUDENT
VALUES('153', 'Aditya', 'Kolkata', '9900990099', 'aditya@gmail.com', '2001-06-20', '2020-07-21', '2024-06-20', 'Kolkata', '1006', '1240', '10310', '410');
INSERT INTO STUDENT
VALUES('158', 'Ayush', 'Howrah', '9900990099', 'ayush@gmail.com', '2001-12-07', '2020-07-21', '2024-06-20', 'Kolkata', '1001', '1200', '10410', '410');

INSERT INTO DEPARTMENT
VALUES('1001', 'CSE');
INSERT INTO DEPARTMENT
VALUES('1002', 'EE');
INSERT INTO DEPARTMENT
VALUES('1006', 'CE');
INSERT INTO DEPARTMENT
VALUES('1029', 'ME');

```

7. Create a view named vStudentDept to retrieve student id, studentname and departname by joining both the tables. WITH SCHEMABINDING option should be added.

```

create view vStudentDept with schemabinding
as select student_id, stu_name, deptname
from dbo.student inner join dbo.DEPARTMENT
on student.DeptId = DEPARTMENT.DeptId
go

```

8. Retrieve Studentname and departname from vStudentDept view only for CSE department.

```

select * from vStudentDept
where DeptName = 'cse';

```

	student_id	stu_name	deptname
1	101	Shivam	CSE
2	103	Satyam	CSE
3	121	Rahul	CSE
4	132	Rajeev	CSE
5	139	Shorab	CSE
6	158	Ayush	CSE

9. Create a unique clustered index on student id column of vStudentDept view.

```

CREATE UNIQUE CLUSTERED INDEX cls_studep on vStudentDept(student_id);

```

10. Create a nonclustered index on departname column of vStudentDept view

```

CREATE NONCLUSTERED INDEX ncls_studept ON vStudentDept (DeptName);

```

	index_name	index_description	index_keys
1	cls_studep	clustered, unique located on PRIMARY	student_id
2	ncls_studept	nonclustered located on PRIMARY	deptname