Assignment 8
201001001013

1. Create a table named StudentBkup having the same structure as Student. One identity primary key column to be added as studentBkupId. No other constraint needs to be created.

```
CREATE TABLE STUDENTBKUP(
STUDENTBKUPID INT PRIMARY KEY,
STUDENTNAME VARCHAR(50),
DEPTNAME VARCHAR(50),
EXAM_MARKS INT,
DETAILS VARCHAR(100)
);
```

2. Create a table named ExamMarksNew having the same structure as ExamMarks. One identity primary key column to be added as examMarksNewId. No other constraint needs to be created.

```
CREATE TABLE EXAMMARKSNEW(
EXAMMARKSNEWID INT PRIMARY KEY,
EXAM_MARKS INT,
DETAILS VARCHAR(100)
);
```

3. Create a DML after trigger to insert the deleted/modified data from Student table to StudentBkup table every time a delete or update happens on the table.

```
CREATE TRIGGER TR_STUDENT_FORDELETE
ON STUDENT
FOR DELETE
AS
BEGIN
DECLARE @ID INT, @NAME VARCHAR(50), @DNAME VARCHAR(50), @MARKS INT
SELECT @ID=STUDENTID FROM DELETED
SELECT @NAME=STUDENTNAME FROM DELETED
SELECT @DNAME=DEPTNAME FROM DELETED
SELECT @MARKS=EXAM_MARKS FROM DELETED
INSERT INTO STUDENTBKUP VALUES(@ID, @NAME, @DNAME, @MARKS, 'DELETED THIS STUDENT RECORDS
AT TIME:- ' + CAST(GETDATE() AS NVARCHAR(20)))
END

CREATE TRIGGER TR_STUDENT_FORMODIFY
ON STUDENT
FOR UPDATE
AS
BEGIN
DECLARE @ID INT, @NAME VARCHAR(50), @DNAME VARCHAR(50), @MARKS INT
SELECT @ID=STUDENTID FROM DELETED
SELECT @NAME=STUDENTNAME FROM DELETED
SELECT @DNAME=DEPTNAME FROM DELETED
SELECT @MARKS=EXAM_MARKS FROM DELETED
INSERT INTO STUDENTBKUP VALUES(@ID, @NAME, @DNAME, @MARKS, 'UPDATED THIS STUDENT RECORDS
AT TIME:- ' + CAST(GETDATE() AS NVARCHAR(20)))
END
```

StudentBkupId	StudentName	DeptName	Exam_Marks	Details
1	Tauquir	CSBS	85	Updated this Student Records at Time:- Dec 6 2022 9:21PM
5	Koyena	Bio Tech	96	Deleted this Student Records at Time:- Dec 6 2022 9:19PM

StudentId	StudentName	DeptName	Exam_Marks	Details
1	Tauquir	CSBS	99	xyz
2	Ripan	CSBS	90	xyz
3	Soumik	CSE	80	xyz
4	Aamir	ECE	100	xyz

Question 4. Create a DML instead of trigger to INSERT the data to be modified/added in ExamMarks table to ExamMarksNew table every time an update/INSERT happens on the table. There will be no change to the original table data.

```sql
CREATE TRIGGER TR_EXAM_MARKS_INSTEADOF_INSERT
ON EXAMMARKS
INSTEAD OF INSERT
AS BEGIN
DECLARE @ID INT, @MARKS INT
SELECT @ID=EXAMMARKSID FROM INSERTED
SELECT @MARKS=EXAM_MARKS FROM INSERTED
INSERT INTO EXAMMARKSNEW VALUES(@ID, @MARKS, 'INSERTED THIS DETAILS AT TIME:- ' +
CAST(GETDATE() AS NVARCHAR(20)))
END

INSERT INTO EXAMMARKS VALUES(5,98,'XYZ'); CREATE
TRIGGER TR_EXAM_MARKS_INSTEADOF_UPDATE
ON EXAMMARKS
INSTEAD OF UPDATE
AS
BEGIN
DECLARE @ID INT, @MARKS INT
SELECT @ID=EXAMMARKSID FROM INSERTED
SELECT @MARKS=EXAM_MARKS FROM INSERTED
INSERT INTO EXAMMARKSNEW VALUES(@ID, @MARKS, 'UPDATED THIS DETAILS AT TIME:- ' +
CAST(GETDATE() AS NVARCHAR(20)))
END
```

ExamMarksNewId	Exam_Marks	Details
2	80	Updated this details at Time:- Dec 6 2022 5:08PM
5	98	Inserted this details at Time:- Dec 6 2022 5:07PM

ExamMarksId	Exam_Marks	Details
1	85	xyz
2	90	xyz
3	80	xyz
4	100	xyz
5	95	xyz