# B.Sc. Engg. 1st Batch 4th Year 1st Semester 2019

# DBMS LAB

**DISCUSSION-4**

1. Trigger

Trigger is special type of Stored Procedure which is attached to a table and is only executed (also known as fired) when an INSERT, UPDATE or DELETE (i.e., modification of table data) occurs on that table. . One has to specify the modification action(s) that fire the trigger when it is created.

Unlike stored procedures, triggers can not be explicitly executed.

Example: 1 The following trigger shows a message when a row is inserted in Items table CREATE TRIGGER trg\_test ON Items FOR INSERT

AS BEGIN

PRINT ‘Data inserted in Item Table’

END

1. Triggers can be used for automatically updating a table when an insert/update/ delete statement takes place in another table. For example, whenever a Transactions takes place, i.e., a row is inserted in the Transactions Table, item\_qoh field in the Items table should be updated either by increasing it or decreasing.

In such cases, a table called INSERTED is used by the trigger.

* + INSERTED is a temporary table that SQL server automatically creates whenever an insertion takes place in a table. The inserted table holds only the row that is getting inserted.
  + Similarly, a temporary table called DELETED consisting of row that is getting deleted is created when a deletion takes place.
  + Both INSERTED and DELETED tables get created when an UPDATE statement takes place.

The following trigger updates items table whenever a transaction takes place.

CREATE TRIGGER trg\_update\_item ON Transactions FOR INSERT AS

BEGIN

DECLARE @item\_id char(6), @tranamount int, @tran\_type char(1)

SELECT @item\_id=item\_id, @tranamount=tran\_quantity, @tran\_type=tran\_type FROM INSERTED IF (@tran\_type ='S')

UPDATE Items SET item\_qoh=item\_qoh- @tranamount WHERE item\_id=@item\_id ELSE

UPDATE Items SET item\_qoh=item\_qoh+ @tranamount WHERE item\_id=@item\_id

END

# Assignment

Task 1: Write a trigger on Transaction that automatically updates the sold\_amnt or proc\_amnt field of CustomersAndSuppliers table whenever a transaction happens.