* 1. Batch: set of independent statements, in sense of error and rows count
  2. Script: similar to batch; a batch is converted to group of scripts by dividing using 'GO'
  3. Transaction: set of dependent queries, single unit of action, all fail or all succeed
  4. Stored Procedure: saves time from query life cycle by pre compiling the queries. Accepts all DQL. Hides all meta data for security. Could have parameters. Stored on schema level
  5. Trigger: Implicit stored proc, has no parameters, stored by default on the same level of object it listens to it
  6. Stored proc: return is optional, expected to return int -> execution status, allows DML and execute
  7. Function: return is not optional, doesn’t allow DML or execute

1. When used in transaction: all could be rolled-back
   1. Drop: DDL no rollback, auto commits, table is removed from DB
   2. Truncate: DDL no rollback, all rows are deleted while table remains
   3. Delete: DML, data is logged and could rollback, specific columns
   4. SELECT: returns result set
   5. SELECT INTO: creates new table and inserts the result set inside it
   6. @Local: on the level of batch/script/function/SP
   7. @@Global: on the level of server, could be affected by different users
2. Both have same functionality, but convert has an optional third parameter for formatting date and other dtypes
   1. CONVERT(dtype, value)
   2. CAST(value AS dtype)
   3. DDL: create, drop, truncate, alter -> structure of tables and DB
   4. DML: update, delete, inserted -> manipulate data
   5. DCL: grant, revoke -> control access on DB
   6. DQL: select
   7. TCL: rollback, commit, begin transaction END -> transactional control lang.
   8. Raw: stores data with repeating tags, as viewed in result set
   9. Auto: formats children tags inside parents without repeating parent
   10. Table valued -> returns must return table: RETURNS TABLE AS RETURN (SELECT …)
   11. Multi Statement -> returns any dtype: RETURNS @vname DTYPE AS   
       BEGIN   
       …   
       RETURN  
       END
   12. varchar(max) is a data type that exceeds limit size of varchar(n)
   13. varchar(50) 50 unicode characters
   14. Datetime: can’t define seconds precision value, 3 places by default
   15. Datetime2(7): 7 fraction places for seconds
   16. Default instance: server named after the desktop name
   17. Named instance: chosen name
   18. Windows auth: used for system admin by default and only requires user to be logged in his windows
   19. Sql auth: username and password
   20. Clustered index: only one per table. Binary search tree where nodes are the data itself. Usually on primary key (built automatically)
   21. Non-clustered: multiple per table. BST where nodes are the column values and pointers to the corresponding row on disk
   22. Rollup: applies aggregate function on all groups at the end of each level
   23. Cube: applies aggregate function on all combinations of grouping levels
   24. Sequence: has min, max, step, and cycle. Must be called each time to get the next number. Many sequences per table, many tables per sequence.
   25. Identity: has start and step. Auto populates column values. Only one identity per table and one table per identity
   26. Inline function: table valued function composed of single query line. Has parameters and can’t run DML
   27. View: select statement with no parameters. Could be used to run DML on the selected data
   28. Table variable: local on the level of batch/script
   29. Temporary table: on the level of schema but visible only to its creator user. Its lifetime ends with the session
   30. Row\_number: enumerate rows in each partition sorted by a given column, with no ties
   31. Dense\_rank: rank rows in each partition, on ties gives the same rank. The given ranks are sequential