**T/SQL Programming**

* T/SQL stands for “Transact Structure Query Language. It is an extension of SQL language. This T/SQL is same as PL/SQL in oracle.
* In SQL we can execute single line statement only where as in T/SQL we can execute block of statements at a time.
* SQL does not support conditional and looping statements like IF-Else and While loop. But we can implement these conditional and looping statements in T/SQL.
* SQL language will not provide reusability facilities where as T/SQL language will provide reusability facilities by defining objects such as Procedures and Functions.
* T/SQL commands can be embedded inside the programs where program is a block of code.
* T/SQL Program blocks can be divided into two types. Those are

1. Anonymous Blocks

2. Sub-Program Blocks

**Anonymous Blocks**: Anonymous Blocks are called as unnamed block of

code which is executed at any point of time and does not store on database. These blocks can be written on a query window and execute.

**Sub-Programs:** Sub program Blocks are called as named block of code which is executed at any point of time and stored on database. These blocks are providing reusability of code.

**Declaring Variables In T/SQL Program:**

Syntax: Declare @ <var> [as] <data type > [size]…….

Ex: declare @ eid int; decalare @ename varchar (50)….

While declaring variable, we should be prefixed with @ symbol.

**Assigning Values to variables**: Values can be assigned by using a SET

statement.

Syntax: Set @ <var>=<value>

Ex: Set @Eid=101; Set @ename=’SAI’;

**Printing Values of Variables:** If we want to print the values we can use

the PRINT statement.

Syntax: Print @ <var>

Ex: Print @Eid;

**Structure of T/SQL Program:**

**Syntax:** Declare @ <var1> [data type][size]………………

Set @ <var>=<values>

<Statements>;

Print @<var>…….

**Ex1**:Write a T/SQL program to input two values and interchange the variable

values.

declare @a int,@b int,@c int;

set @a=10;

set @b=20;

set @c=@a;

set @a=@b;

set @b=@c;

print @a;

print @b;

**Ex2**: Write a T/SQL program to input student id,name,marks and find the total

marks of a student.

declare @stdno int,@stdname varchar(50),@m1 int,@m2 int,@m3 int,@tm int;

set @stdno=101;

set @stdname='SAI';

set @m1=75;

set @m2=85;

set @m3=65;

set @tm=@m1+@m2+@m3;

print @stdno

print @stdname;

print @tm

**Ex3:**Write a T/SQL programer to perform arithematic operation.

declare @a int,@b int,@c int,@d int,@e int,@f int;

set @a=10;

set @b=12;

set @c=@a+@b;

set @d=@a-@b;

set @e=@a\*@b;

set @f=@a/@b;

print @c;

print @d;

print @e;

print @f;

**Conditional Statements**: It is a block of code, which executes based on a condition.

If-Else Statement: In if-else conditional control statement, statements in if

block gets executed only when the condition is true and statements in else block

gets executed only when the condition is false.

**Syntax:**

If (condition)

{

Statements

}

Else

{

Statements

}

**Ex**: Write T/SQL program to find big number from two variables.

declare @a int,@b int;

set @a=30;

set @b=20;

if(@a>@b)

print 'a is big'

else if(@a=@b)

print 'Both are equal'

else

print 'B is big';

**Ex**: To find positive and negative.

declare @a int;

set @a=10;

if(@a>0)

print 'a is positive'

else

if(@a=0)

print 'a is neutral'

else

print 'a is negative'

**Ex:** To find the number is even or odd.

declare @a int

set @a=4

if((@a%2)=0)

print 'a is even';

else

print 'a is odd';

**While loop:** In while loop statements get executed as long as condition is true.

In While it checks the condition first and executes the statements later.

**Syntax:**

While (condition)

{

Statements;

}

**Ex:** Write A T/SQL program to print from 1 to 10 digits

declare @a int

set @a=0;

while(@a<10)

begin

set @a=@a+1;

print @a;

end;