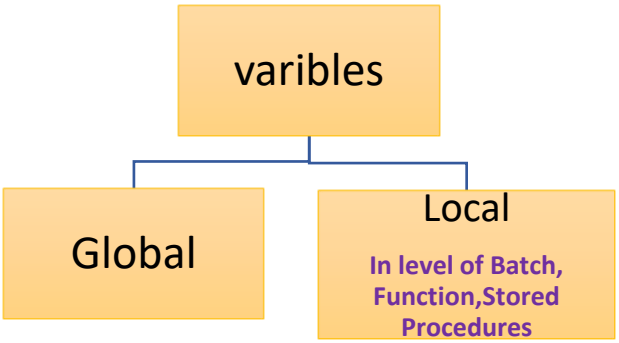
Functions & Variables & Control of flow statement's

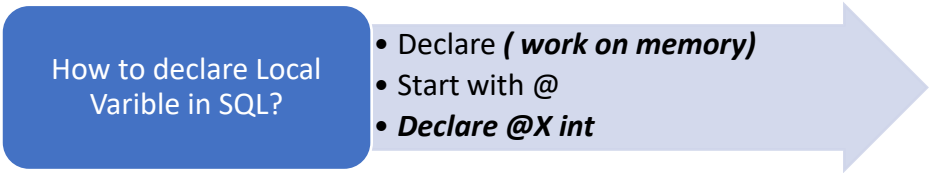
- Before we go through functions you should know ***VARIABLES*** and how to deal with variable and how to deal with control of flow statements→ (loops, if).
- ***Function is the main component*** → how to do function and put your query inside the function
- ***The main feature of function that can we use it anywhere in query*** → SELECT, HAVING, FROM with join as well →its apart of query.

❖ Let us first go through the story of Variables 😊

- ❖ In normal program we define the global variable → here we don't define global variables.
- ❖ Already is defined *even we don't assign value to it.*



- ✓ ***Batch:*** Group pf query → its run together ***(lines that you highlight)***



❖ How to assign value to local variable 😊

Set @X = 100

SELECT @X =90

to display you should write *SELECT @ X*, you should run all 3 lines in same batch (declare, assign , select display)

SELECT @X = age from student where id=10

it will take the result of the query and assign it to the varible (@X = age)

update student Set Fname ='Ali', @X=age -->return age

where id= 9 --> update and select in same time(update name, select age and put it in the varible)

❖ Let us go through Global Varible 😊

Global Varible

- Group of varible as built in
- Start with @@
- We said that its as built in ready to use, So why we call it as varible ??

- **@@ServerName**
- **@@Version**
- **@@RowCount**
- **@@Error**
- **@@identity**

Function

Built-in functions→ (scaler functions)→ *this will return one value*

- →**Null function** (isNull, ifNull)
- →**Aggregate function** → من يذكرني فيهم😊
- →**Math function** (power)
- →**String function** (concat, upper,lower , len …)

User defined functions →we can differentiate between them by syntax, ***return type*** (important 😊)

- →**Scaler** → *return one value* → its okay to use declare, if …. Same as multi statement but here will return one value
- →**Inline table functions** → **return table** →body→select (no if, no declare, no while, no try, no catch
- →**Multi statement table functions** → **return table** →body →select + if, while, declare ,try, catch) → ***Also called →*** ***insert statement based on select*** بنفهمها ف الكود

السؤال: ويش الفرق بينهم؟؟

Depend on the shape the body 😊

Cursor

ID	Name	Age
10	Fatma	21
12	Mohammed	22
16	Salim	22
90	Ali	23

Select * from student

Where age >= 21

- Any query that you run it on the SQL the result of that query we call it result set→ as one block

ايش قصة الكيرسر هذا ؟؟!

- **Okay So what is the story behind the *CURSOR*** 😊

- ✓ **(for loop)** → on the rows which return to me
- ✓ Deal with rows → row by row
- ✓ **Example:** online exams → exam with 10 questions →answer the first one → next one
- ✓ The result it will be ***not in one block*** → 10 rows → it displays row by row
- ✓ In SQL we have table and I want to run query → the result of query will be ***scoter*** (row by row)→ cursor