DIFFERENCE TABLE – 3

Difference between 'static variable' and 'auto variable'

S. No.	STATIC VARIABLE	AUTO VARIABLE
1	We have to specify the storage class to make a variable static.	It is the default storage class.
2	If it is not assigned any value then it will give 0 as output.	If it is not assigned any value then it will give garbage value as output.
3	It is visible to the block in which it is declared and also in the function where it will passed.	It is visible to the block in which the variable is declared.
4	It retains its value between different function calls. It holds its last value.	It retains its value till the control remains in the block in which the variable is declared.

Difference between 'if-else' and 'switch-case'

S. No.	IF-ELSE	SWITCH-CASE
1	If-else statements to take some decision based on given conditions. Condition is a Boolean expression that returns true (nonzero) or false (zero).	Switch statement works with equality relations only.

2	Syntax-
	if(condition)
	statement;
	else
	statement;
		Syntax-
		switch(variable)
		{
		case value1: statements;break;
		case value2: statements;break;
		case value3: statements;break;
		…
		default:
		statements;
		}

3	Here, condition may be checked using any relational operators.	The variable can only be some integer or character only. No floating and string variables allowed.

Difference between 'call-by-value' and 'call-by-reference'

S. No.	CALL-BY-VALUE	CALL-BY-REFERENCE
1	In call-by-value, value of the variable is passed to the calling function by the called function.	In call-by-reference, address of the variable is passed to the calling function by the called function.
2	If data is passed by value, the data is copied from the variable used in main() to a variable used by another function. So if the data passed (that is stored in the function variable) is modified inside the function, the value is only changed in the variable used inside the function. So, the changes will not be reflected in the main().	If data is passed by reference, a pointer to the data is copied instead of the actual variable as is done in a call by value. Because a pointer is copied, if the value at that pointers address is changed in the function, the value is also changed in main().
3	Called function works on the Xerox copy of the original variables and the result needs to be returned to the calling function.	Called function works on the original variables. So, the changes are automatically reflected in the calling function.