14. Explain and differentiate between automatic and non-automatic functions in Verilog coding.

Feature	Non-Automatic Function	Automatic Function
Variable lifetime	Shared/static	Local to each call/dynamic
Reentrancy (safe in loops)	Not safe	Safe
Recursive function support	No	Yes
Memory allocation	Once	Per function call
Default behavior in Verilog	Yes	No

Example	`function [7:0] increment;`
	`  input [7:0] a;`
	`  reg [7:0] temp;`
	`  begin`
	`    temp = a + 1;`
	`    increment = temp;`
	`  end`
	`endfunction`
		`function automatic [7:0]`
		`multiply_add;`
		`  input [7:0] a, b;`
		`  reg [7:0] temp;`
		`  begin`
		`    temp = a * b;`
		`    multiply_add = temp + 1;`
		`  end`
		`endfunction`