



Southern Luzon State University  
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### CPE 09 INTRODUCTION TO HDL

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Score:

#### V. Evaluate my Learning

I. Are the following legal strings? If not, write the correct strings

Declaration		Verilog string
"This is a string displaying the % sign"	ILEGAL	"This is a string displaying %% the sign"
"out = in1 + in2"	LEGAL	
"Please ring a bell \007"	LEGAL	
"This is a backslash \ character\n"	ILEGAL	"This is a backslash \\ character\n"

II. Are these legal or illegal identifiers? If it is illegal, write the correct identifier

a. system1	LEGAL	
b. 1reg	ILEGAL	=> reg1
c. \$latch	ILEGAL	=> latch\$
d. exec\$	LEGAL	

## Sum\_product Verilog Code

From the given example of Verilog code of getting the sum and product of a number, I tried to change the syntax of displaying the value of integer and real variables the %0d and %0.2f. I observed that if I am going to display the value it should be in the same data type all d or f. While if the two given number is an integer and the second one is with the decimal point, the way that I can do is to add the whole number a zero decimal point and declared it as %0.2f both. In getting the product, it displays the answer but the display value of b is different from the value that I assigned. Also, I observed that even though the given decimal point of real is two and I want to make the answer in three decimal places, it is legal.

```
module sum_product();

    integer a, y, b;
    integer sum;

    real x;
    real product;

    initial begin
        a = - 3;
        y = 11;
        sum = a + y;
        $display("\n\t a = %0d, y = %0d, sum = %0.2f", a, y, sum);

        x = - 99.67;
        b = - 8.00;
        product = x * b;
        $display("\n\t x = %0.2f, b = %0.2f, product = %0.3f", x, b, product);
    end
endmodule
```

```
VSIM 24> run
#
#          a = -3, y = 11, sum = 8.00
#
#          x = -99.67, b = -8.00, product = 797.360
VSIM 25> run
```