Raymond You

Pre-Lab 9

Pre 9.1

1,000 ms / 50,000,000 cycles = 20 ms / x

x= 1000000 number of cycles

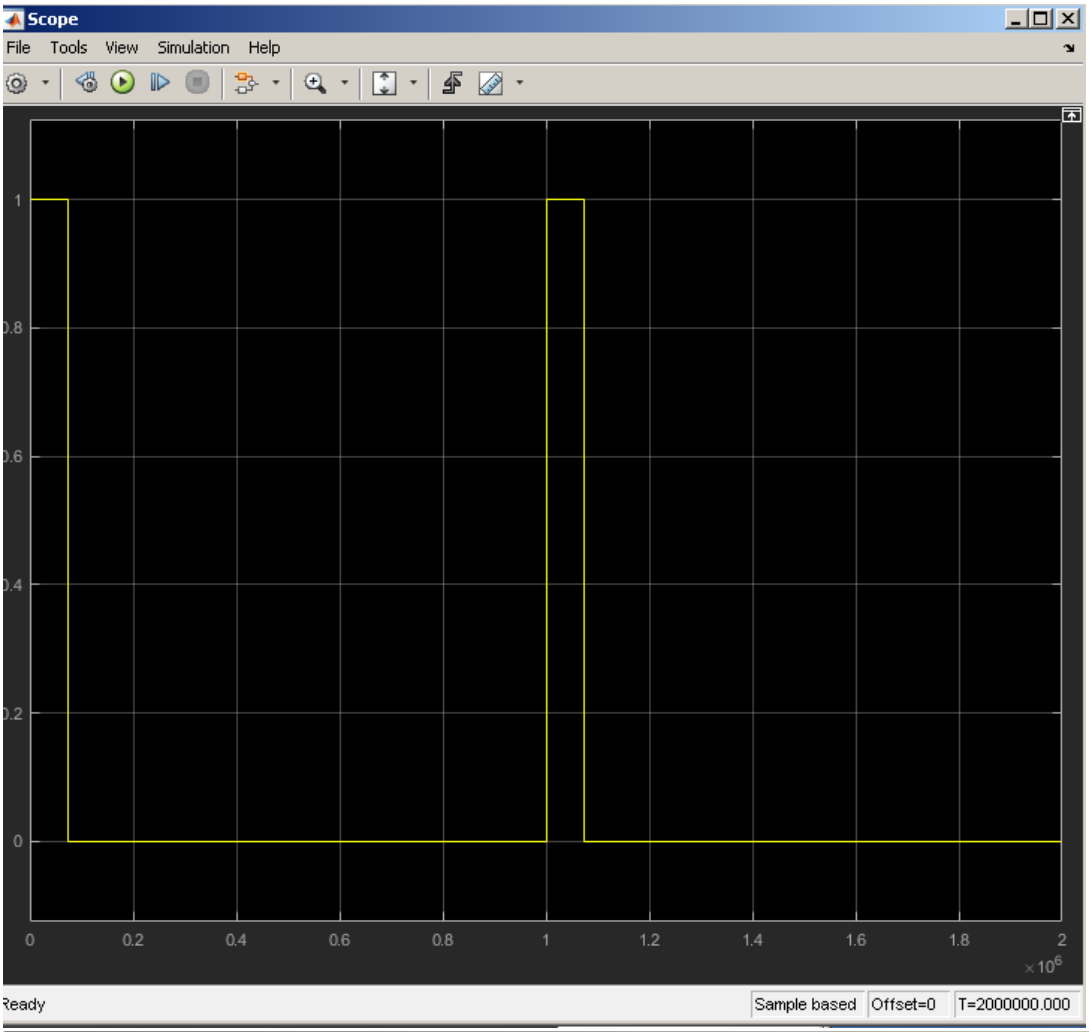
20 ms = 1000000 number of cycles

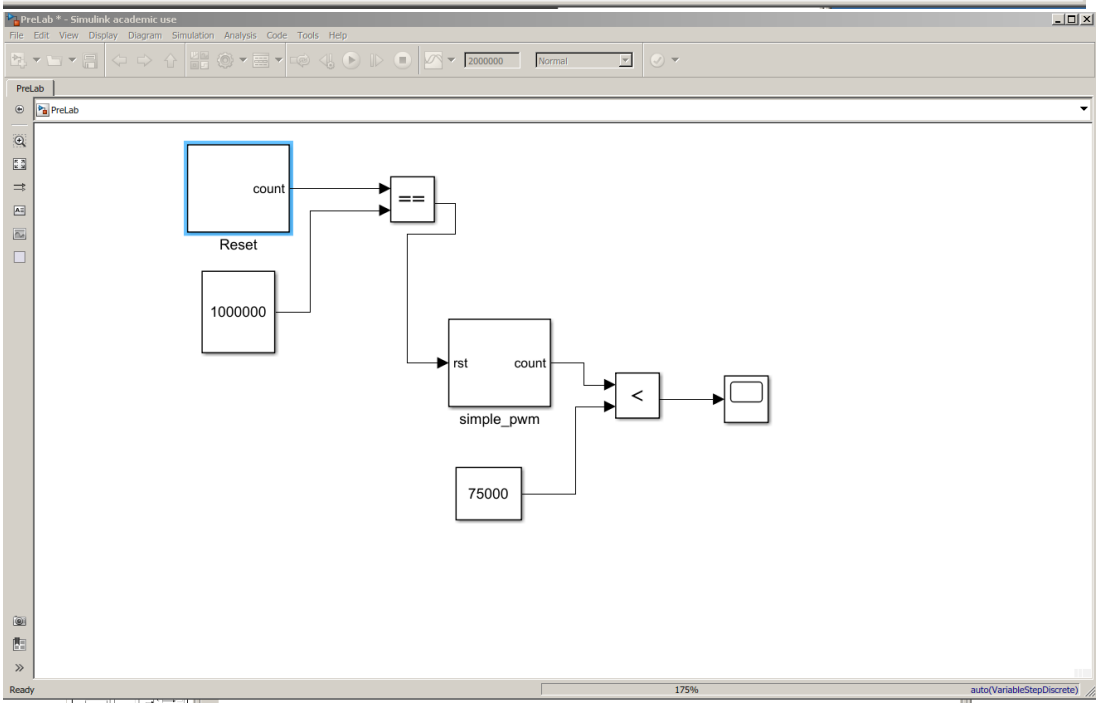
1,000 ms / 50,000,000 cycles = 1.5 ms / x

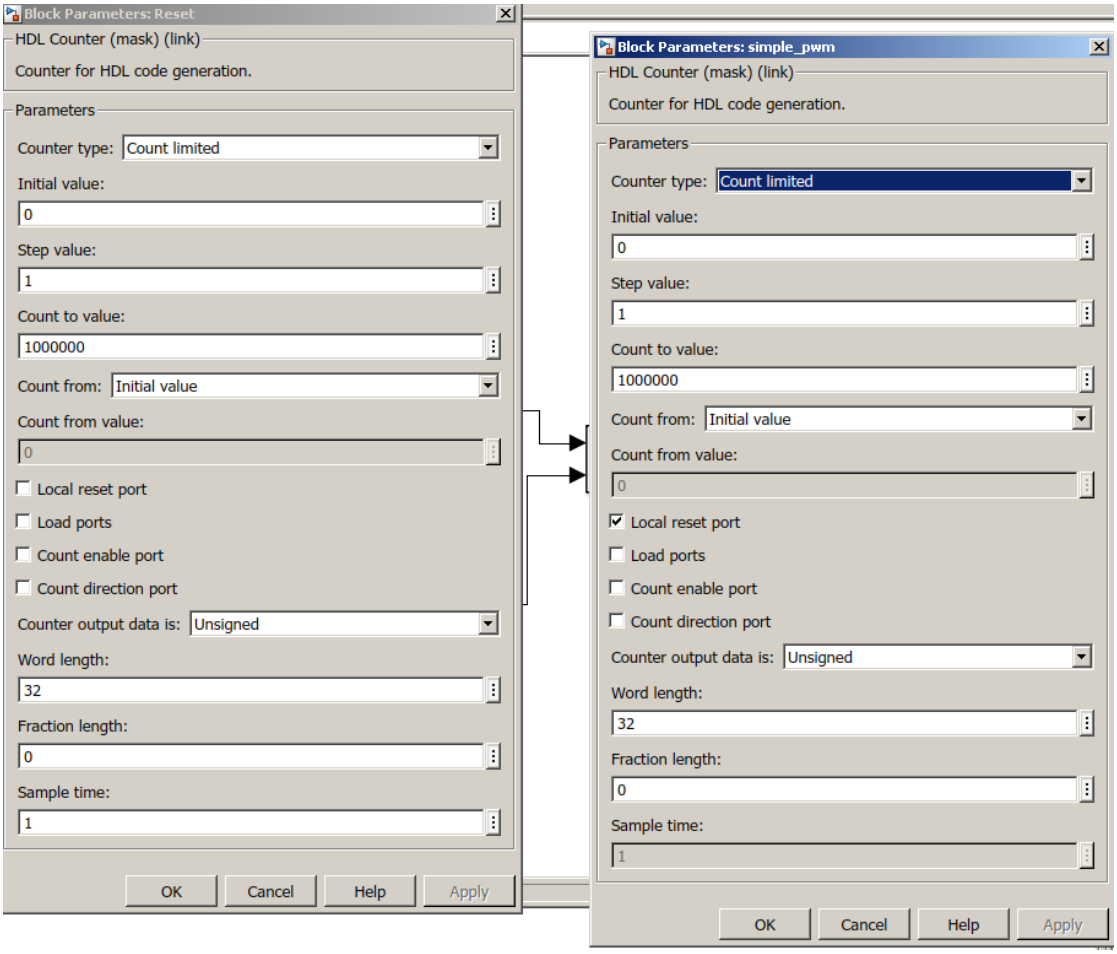
x= 75000 number of cycles

1.5 ms = 75000 number of cycles

For Two periods and each period is 20ms


Scope
File Tools View Simulation Help
1
0.8
0.6
0.4
0.2
0
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2
×10^6
Ready
Sample based
Offset=0
T=2000000.000


PreLab * - Simulink academic use
File Edit View Display Diagram Simulation Analysis Code Tools Help
PreLab
count
Reset
==
1000000
rst
count
simple_pwm
<
75000
Ready
175%
auto(VariableStepDiscrete)


Block Parameters: Reset
HDL Counter (mask) (link)
Counter for HDL code generation.
Parameters
Counter type: Count limited
Initial value:
0
Step value:
1
Count to value:
1000000
Count from: Initial value
Count from value:
0
Local reset port
Load ports
Count enable port
Count direction port
Counter output data is: Unsigned
Word length:
32
Fraction length:
0
Sample time:
1
OK
Cancel
Help
Apply
Block Parameters: simple_pwm
HDL Counter (mask) (link)
Counter for HDL code generation.
Parameters
Counter type: Count limited
Initial value:
0
Step value:
1
Count to value:
1000000
Count from: Initial value
Count from value:
0
Local reset port
Load ports
Count enable port
Count direction port
Counter output data is: Unsigned
Word length:
32
Fraction length:
0
Sample time:
1
OK
Cancel
Help
Apply

Pre9.2

a) 1000000 count value / 20 ms = x count value / 0.6 ms

30000 count value (minValue)

b) 1000000 count value / 20 ms = x count value / 1.5 ms

75000 count value (midValue)

c) 1000000 count value / 20 ms = x count value / 2.4 ms

120000 count value (maxValue)