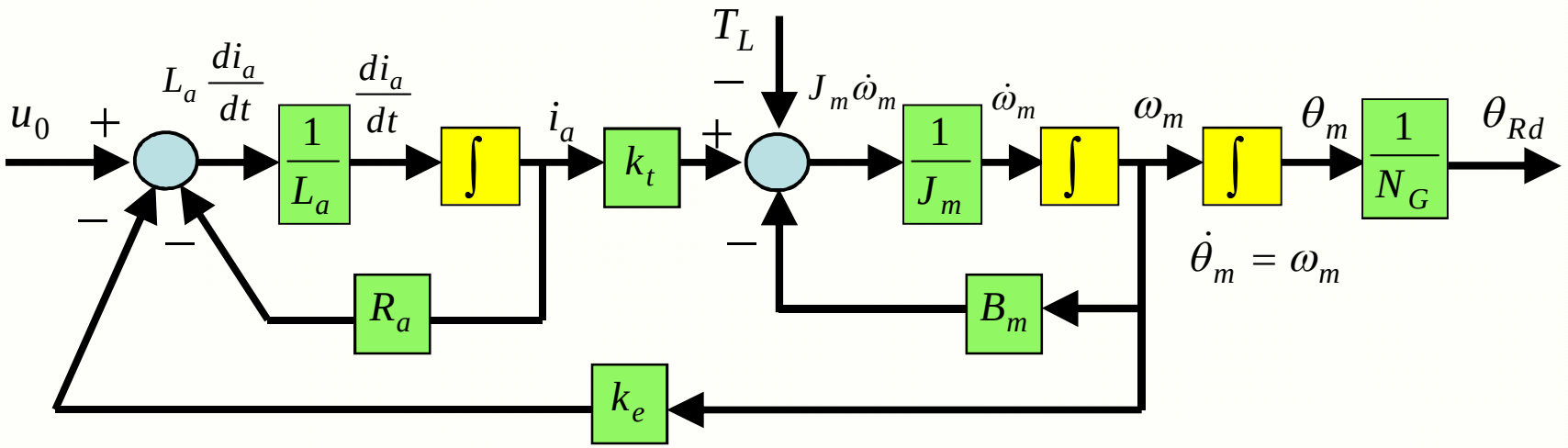
Engineering Softwares



Prof. Dr. İsmail H. Altaş

Karadeniz Teknik Üniversitesi
Elektrik-Elektronik Mühendisliği
61080 Trabzon

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Engineering Softwares

Chapter 2 – SIMULINK Basics

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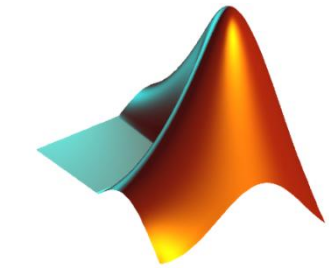

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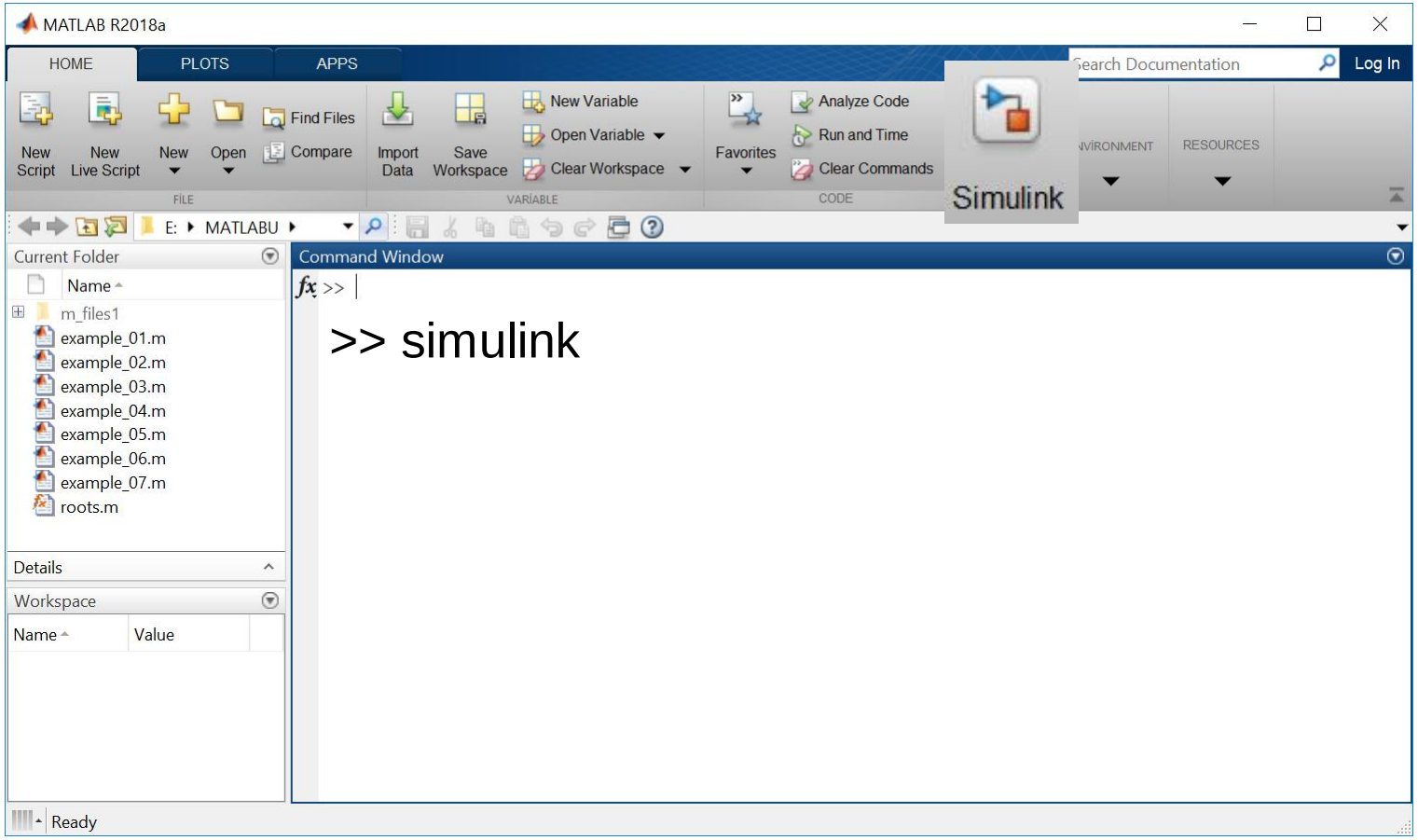
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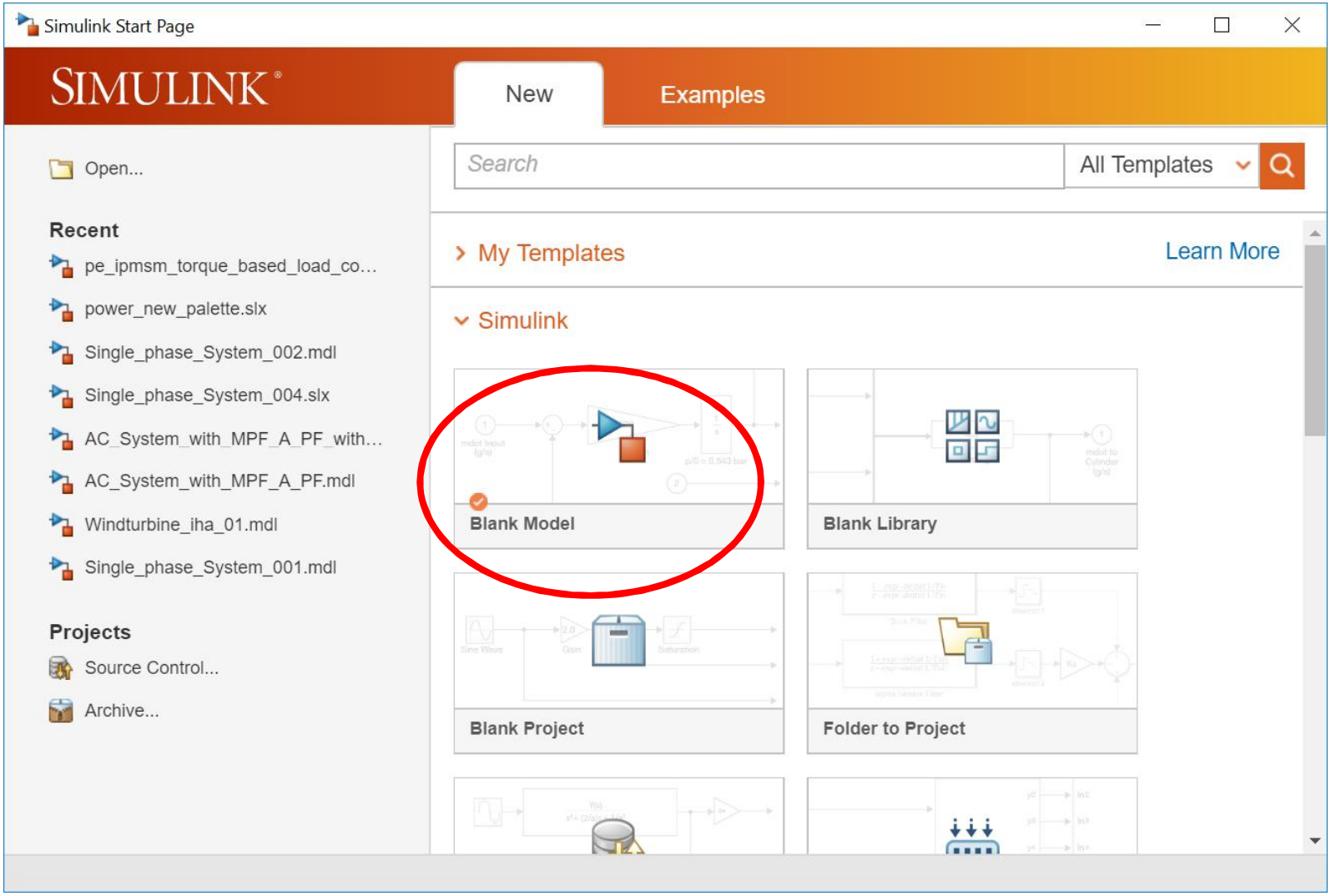
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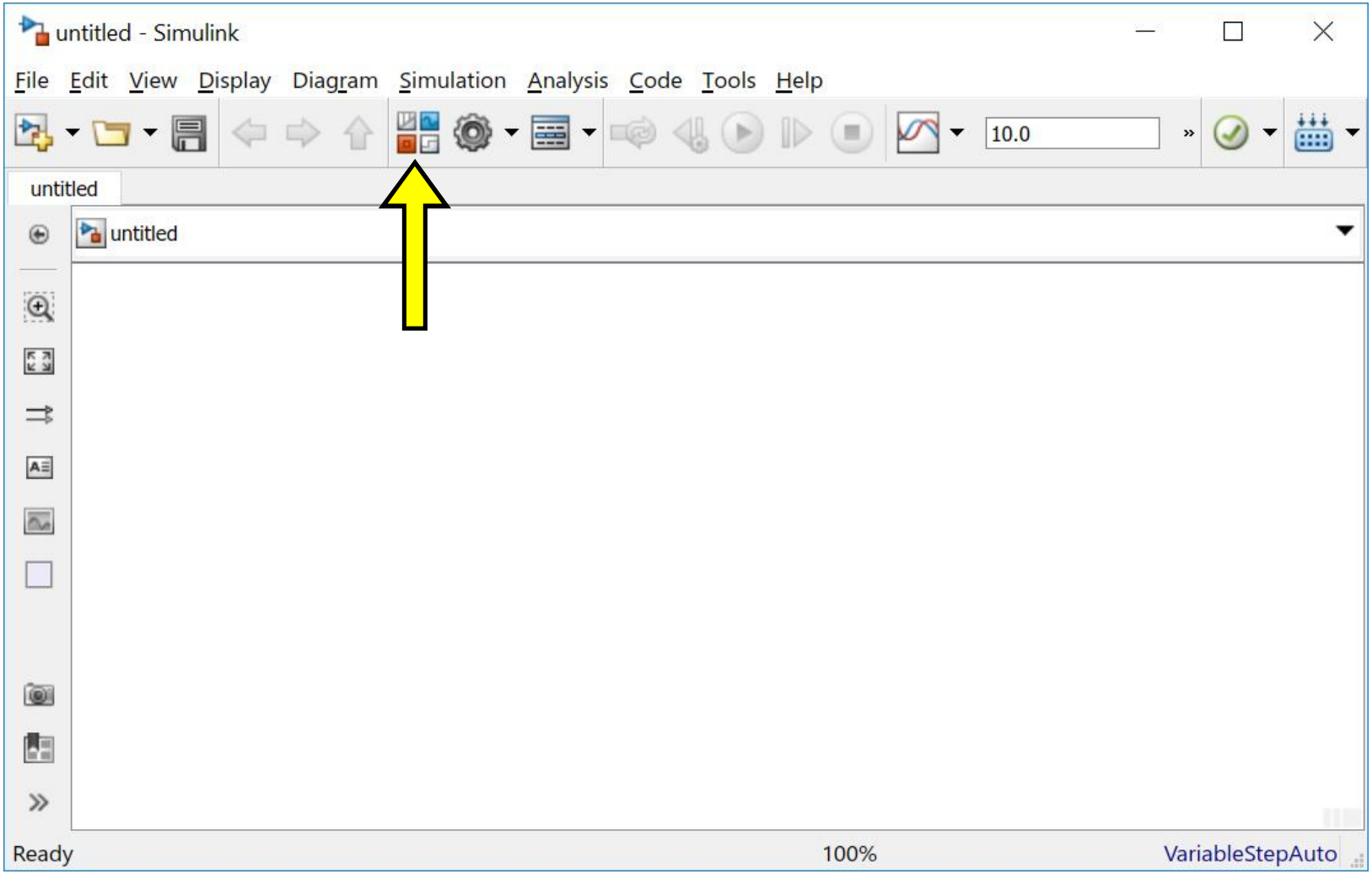
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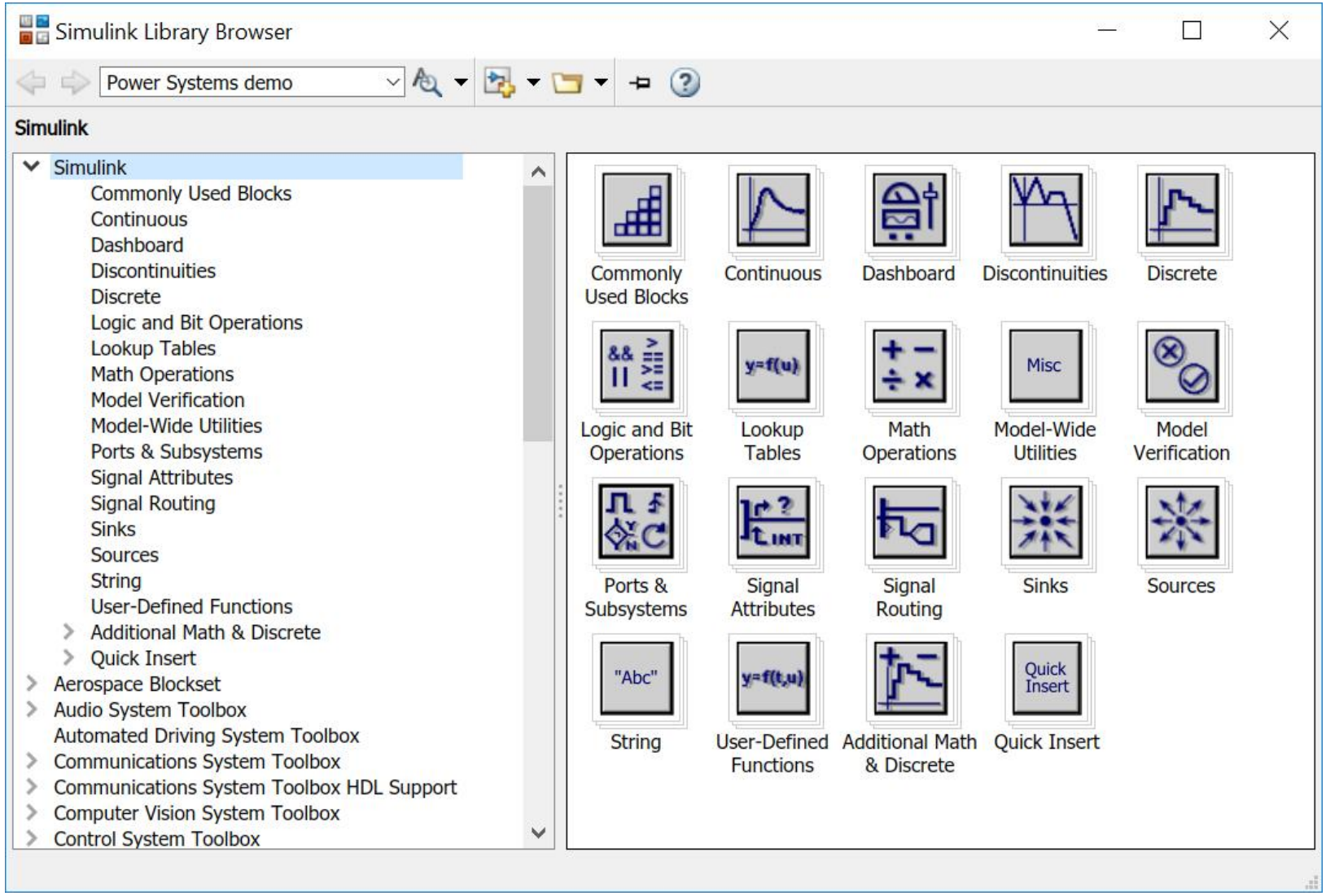
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Model Verification
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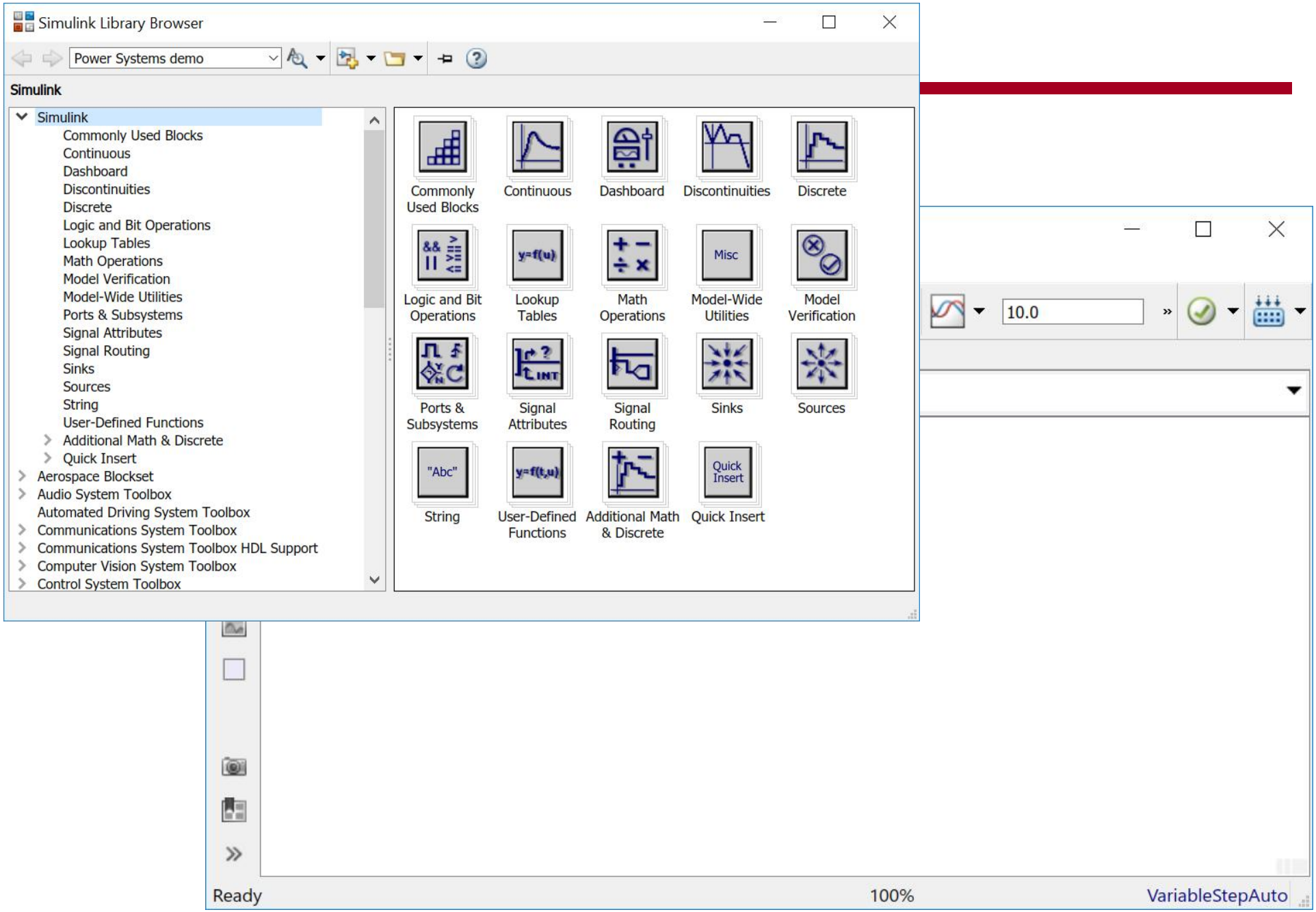
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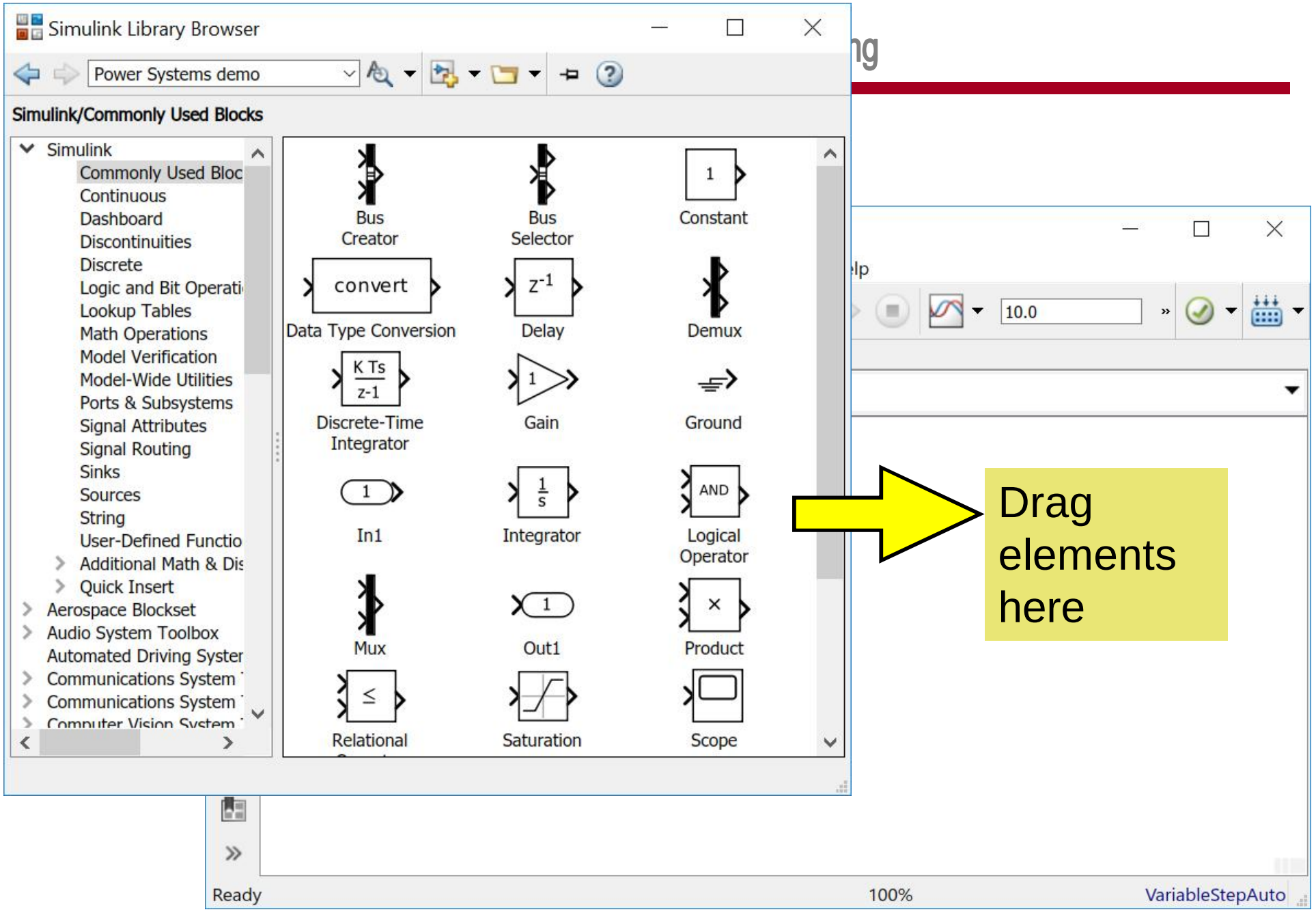
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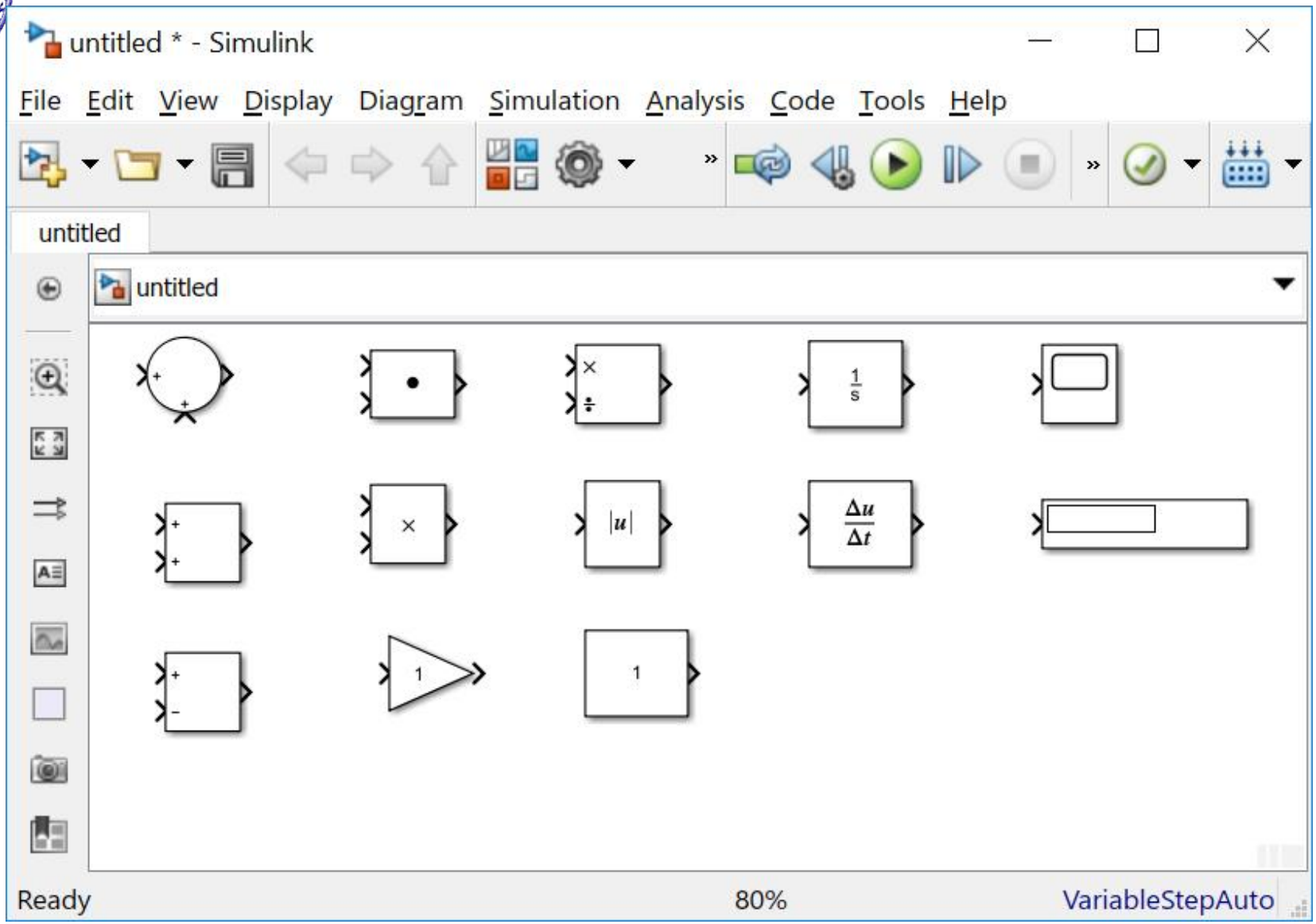
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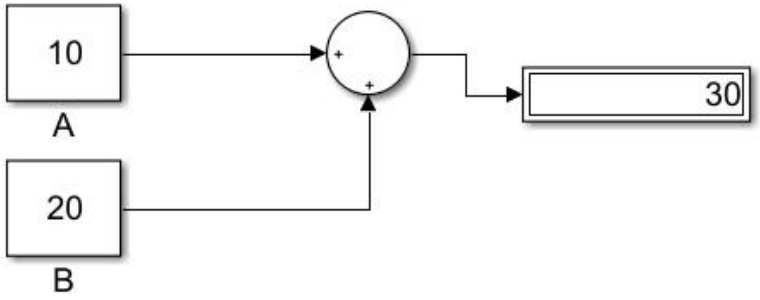
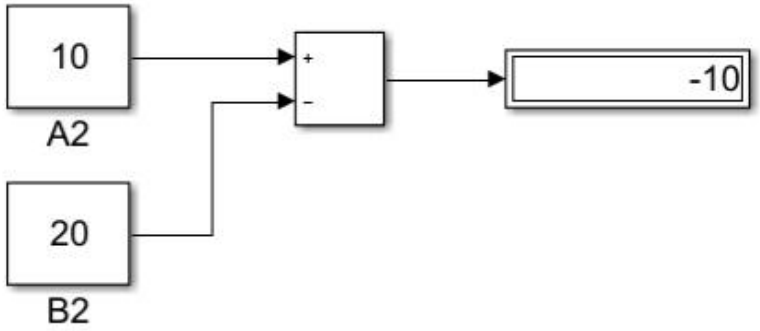
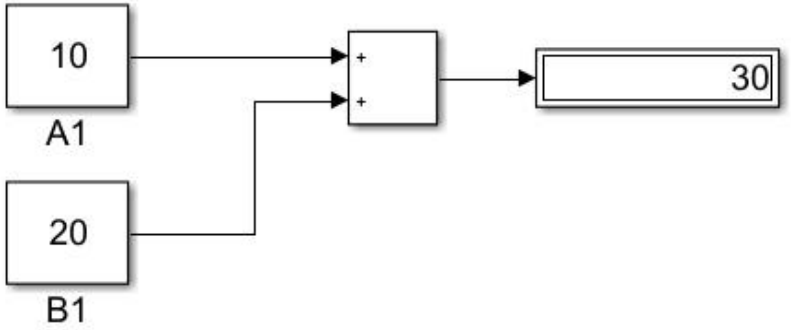
Simulink as an equation solver

$C = A + B$



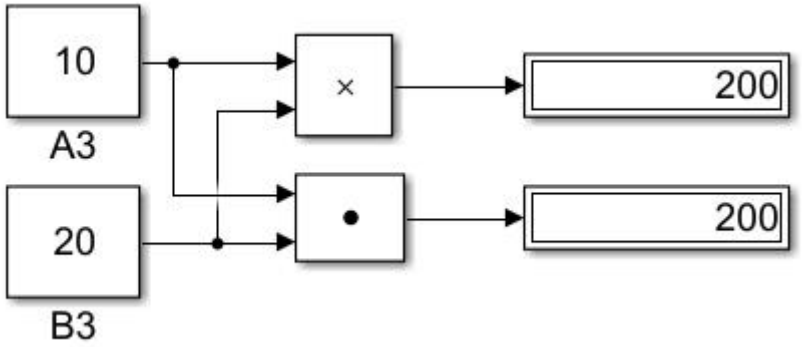
$D = A - B$



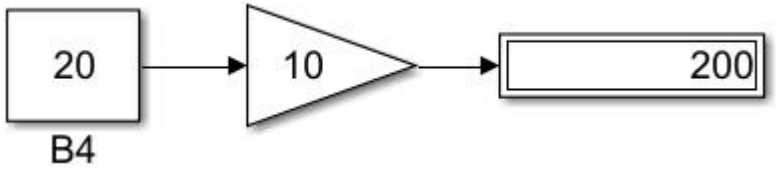


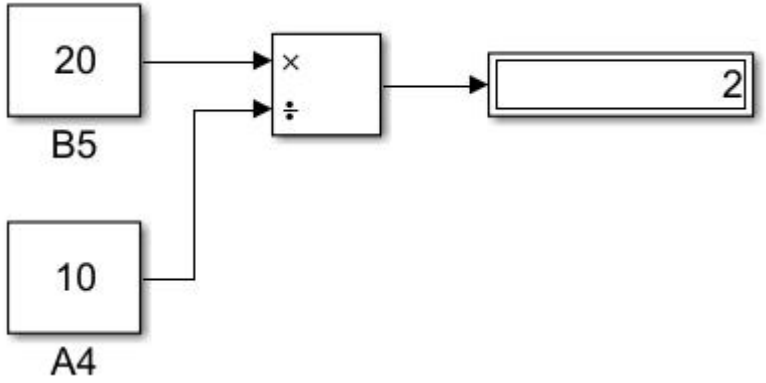
Simulink as an equation solver

$E = A.B$

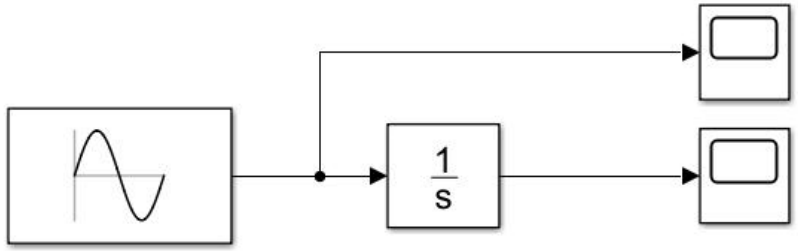


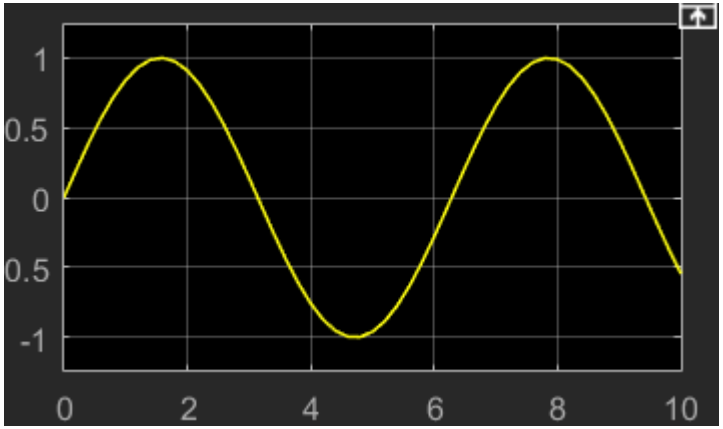
$F = A / B$

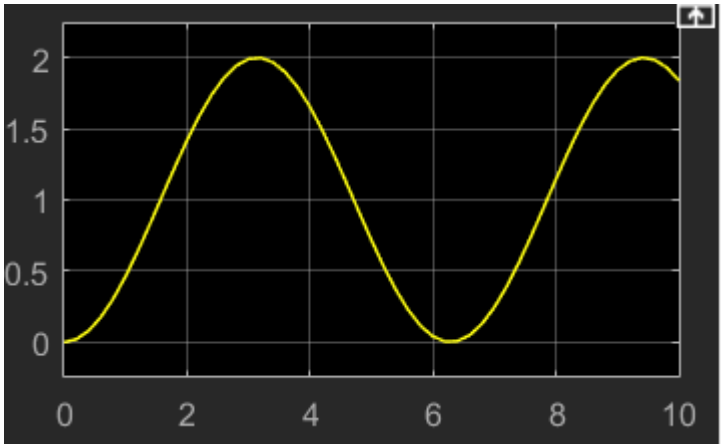




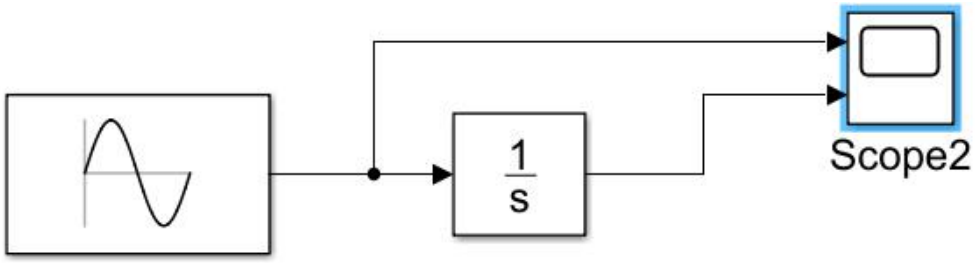
Simulink as an equation solver

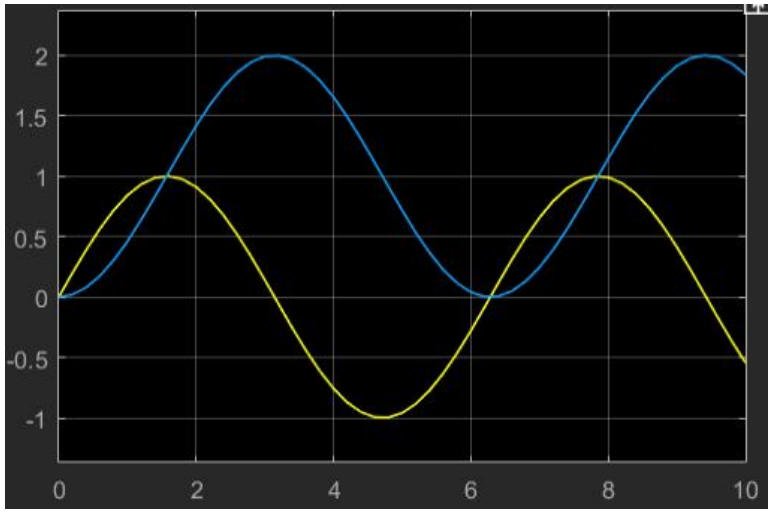


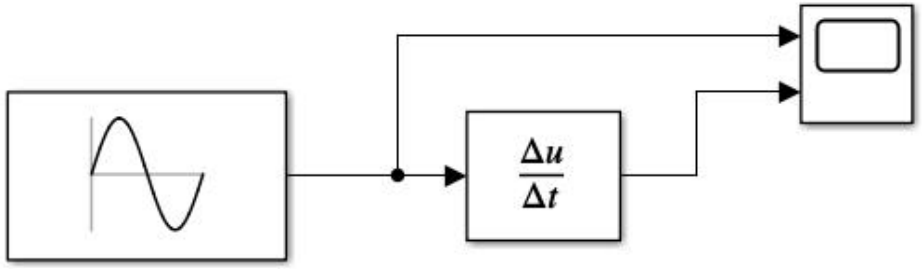


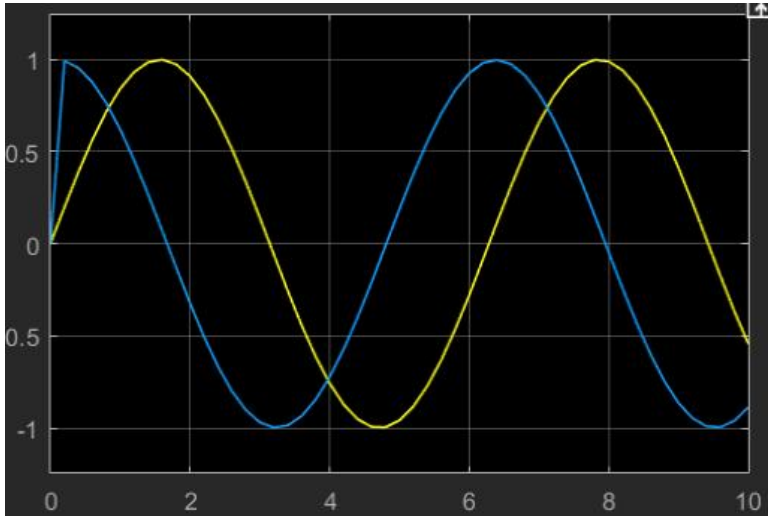


Simulink as an equation solver



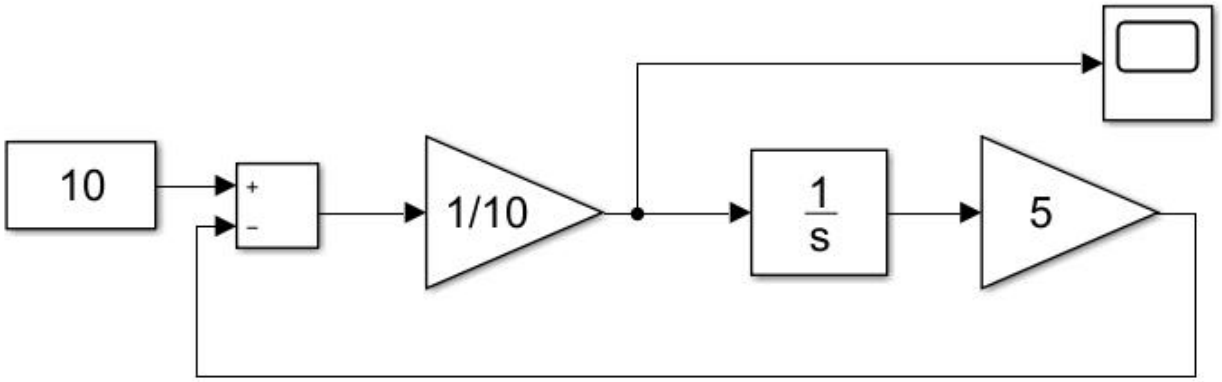


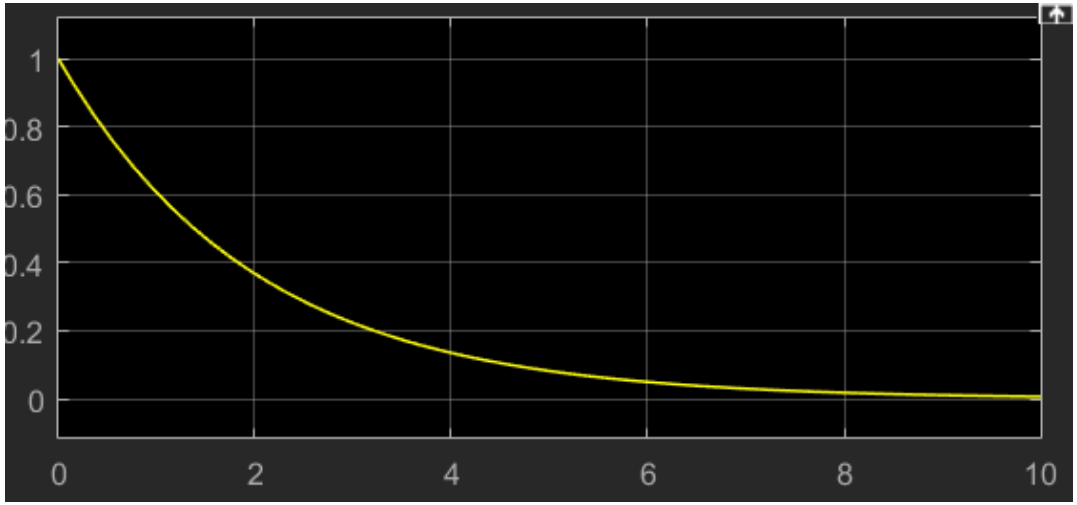




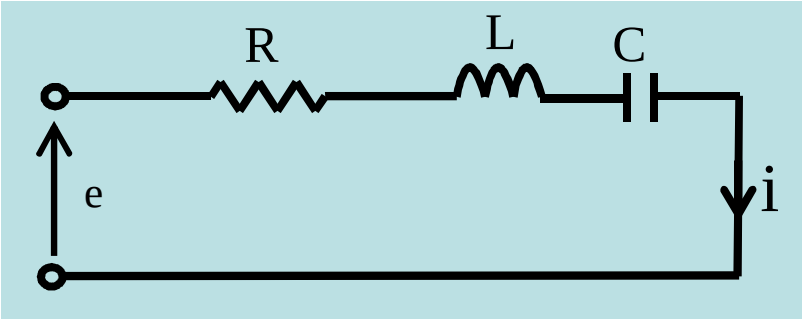
Simulink as an equation solver

$$10 = 10x(t) + 5\int x(t)dt \qquad 10x(t) = 10 - 5\int x(t)dt$$





Example

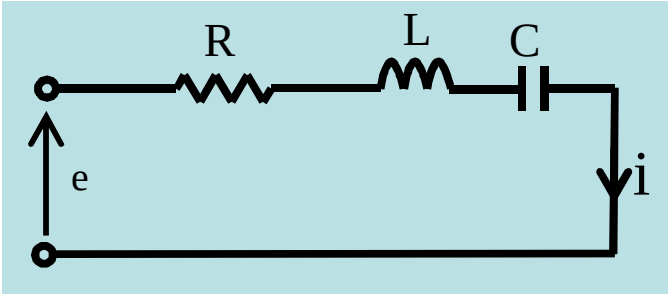


Simulate the series connected RLC circuit and plot the time responce of the currebt i(t)

$$e = Ri + L\frac{di}{dt} + \frac{1}{C}\int i\,dt$$

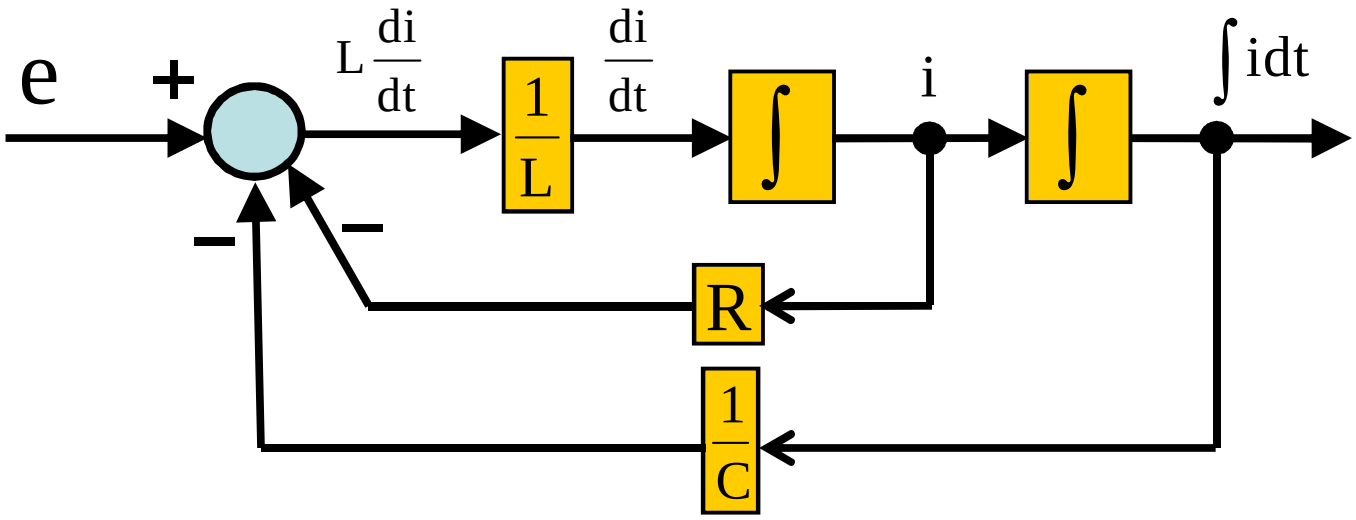
$$L\frac{di}{dt} = e - Ri - \frac{1}{C}\int i\,dt$$

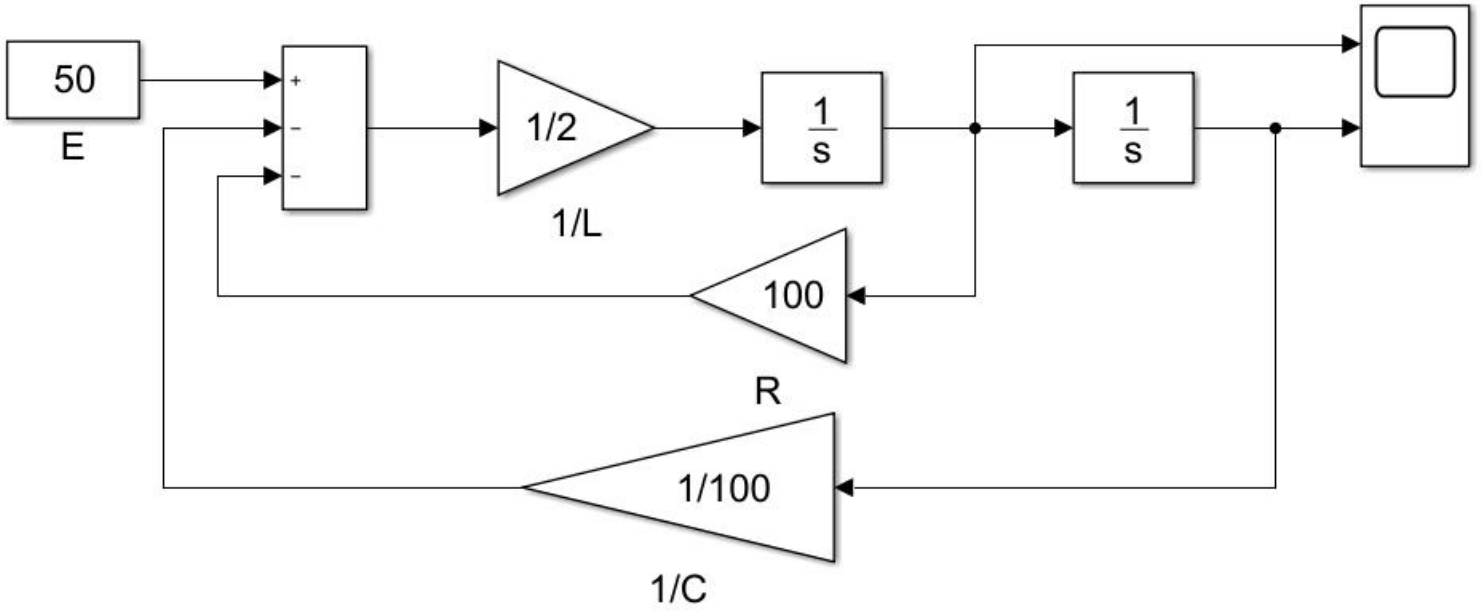
Example 6



L=2 H,
R=100 Ohm;
C=100 F
E=50 V

$$L\frac{di}{dt} = e - Ri - \frac{1}{C}\int i\,dt$$

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+
-
-
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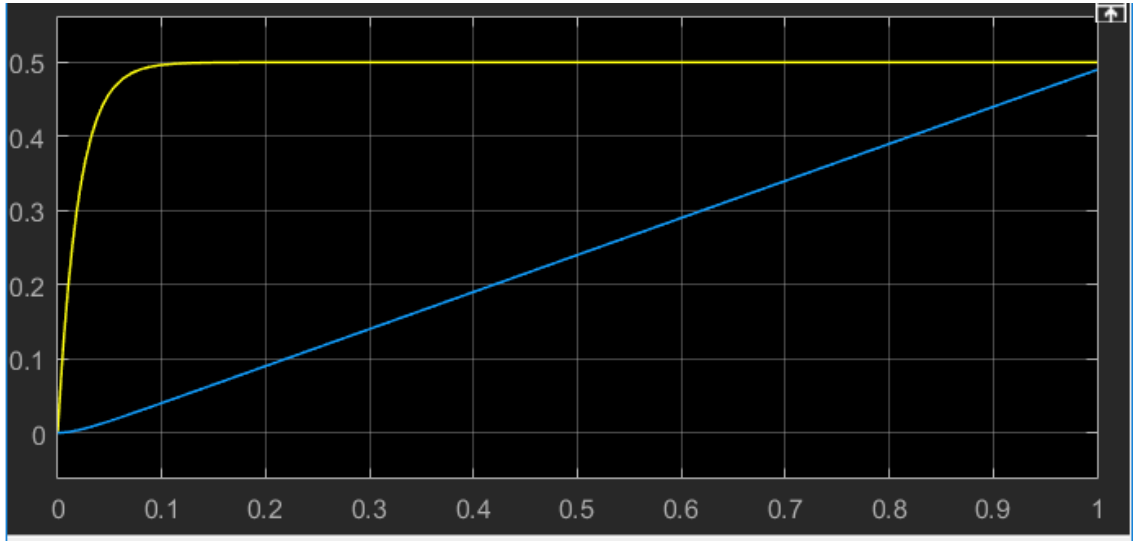
1/L
1
s
1
s
100
R
1/100
1/C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