MERNI INFORMACIONI SISTEMI

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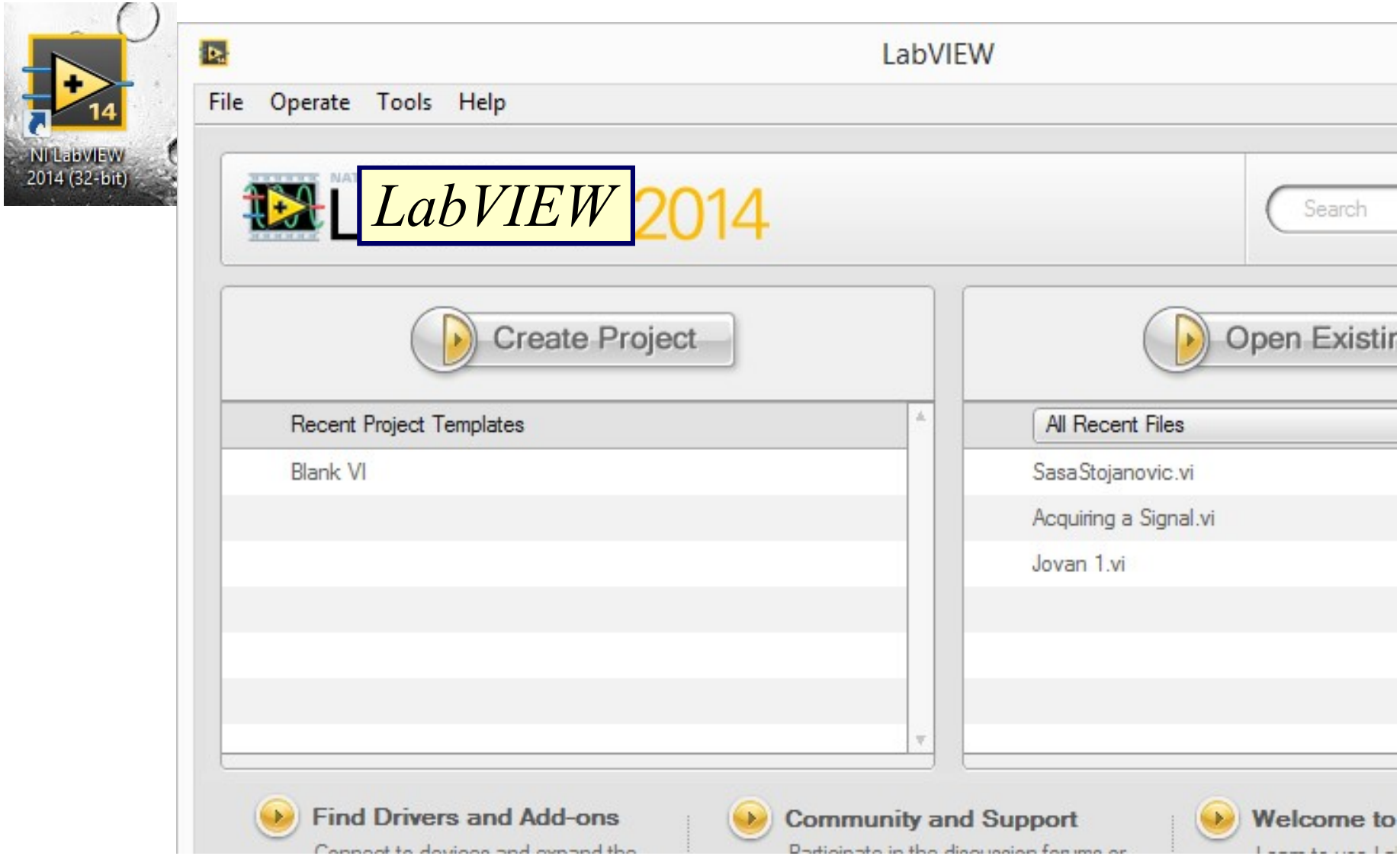
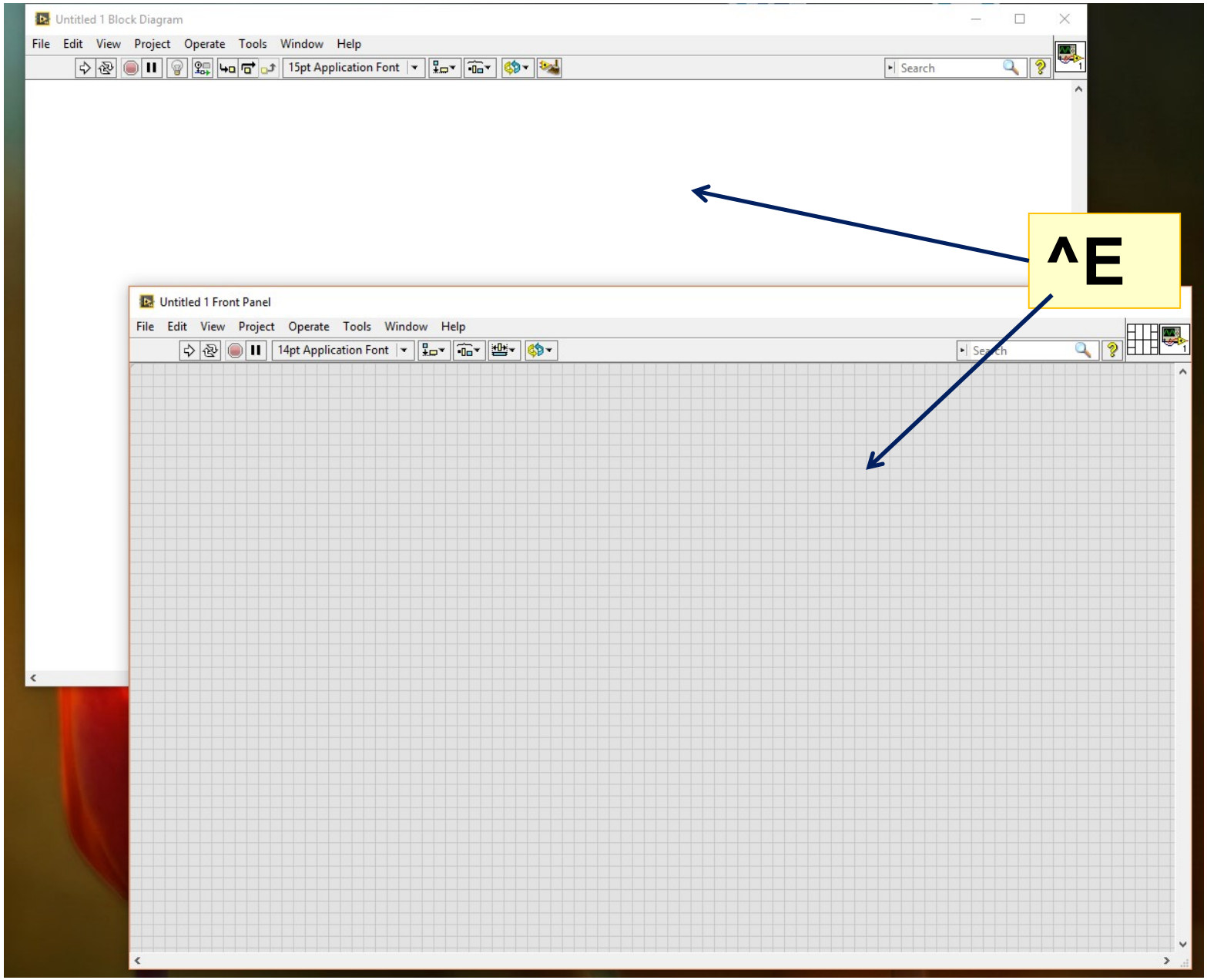
Zašto LabVIEW?

- Koristiti LabVIEW da se reši problem
- Da se pronađu i koriste math i funkcije za kompleksnu analizu
- Da se radi sa različitim tipovima podataka
- Da se prikažu rezultati
- While Loop
- For Loop

Simulacija pomoću virtuelnog instrumenta


NI LabVIEW
2014 (32-bit)
LabVIEW
File Operate Tools Help
LabVIEW 2014
Search
Create Project
Open Existir
Recent Project Templates
Blank VI
All Recent Files
SasaStojanovic.vi
Acquiring a Signal.vi
Jovan 1.vi
Find Drivers and Add-ons
Community and Support
Welcome to


Untitled 1 Block Diagram
File Edit View Project Operate Tools Window Help
15pt Application Font
Search
^E
Untitled 1 Front Panel
File Edit View Project Operate Tools Window Help
14pt Application Font

LabVIEW - Example VI

1. Open LabVIEW
2. clicking on Blank VI in the LabVIEW Getting Started
3. Save the VI as Circle Area Perimeter.vi
    1. Select File → Save
    2. Navigate to the location to save
    3. Name the VI Circle Area Perimeter.vi
    4. Click OK

- VI which calculates
  - area of a circle
  - perimeter of a circle
- given radius r

LabVIEW - Example VI

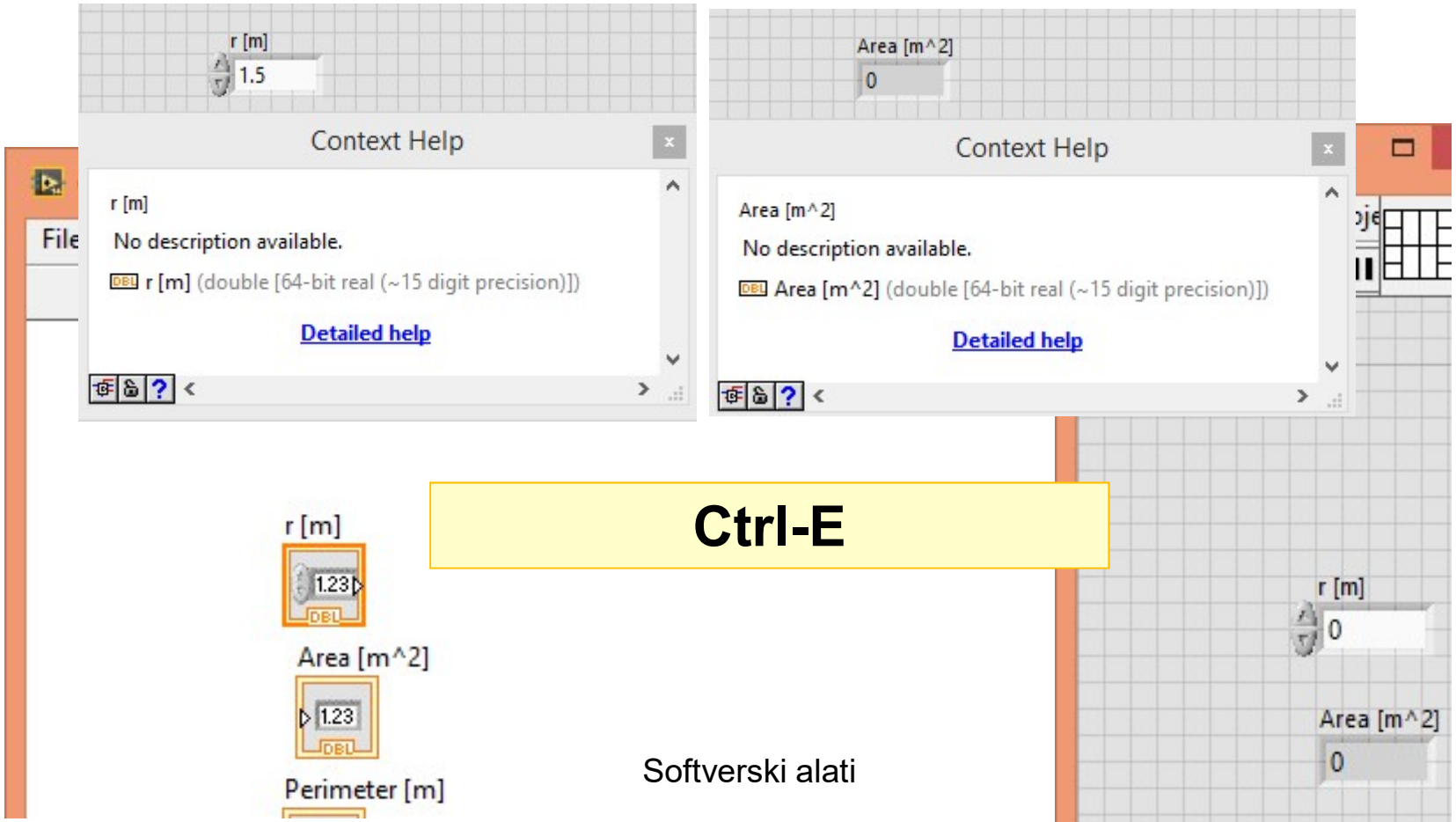
control receives input, indicator displays output

- Create the front panel
  - **Right-click on the front panel** to open the Controls palette, and put down a **Numeric Control** from the Modern → Numeric subpalette
  - Double-click on the label for this control and rename it to r
  - Place down **two numeric indicators** from the Modern → Numeric subpalette and rename them Area and Perimeter
  - change the font of the labels using the font drop-down menu near the menu bar

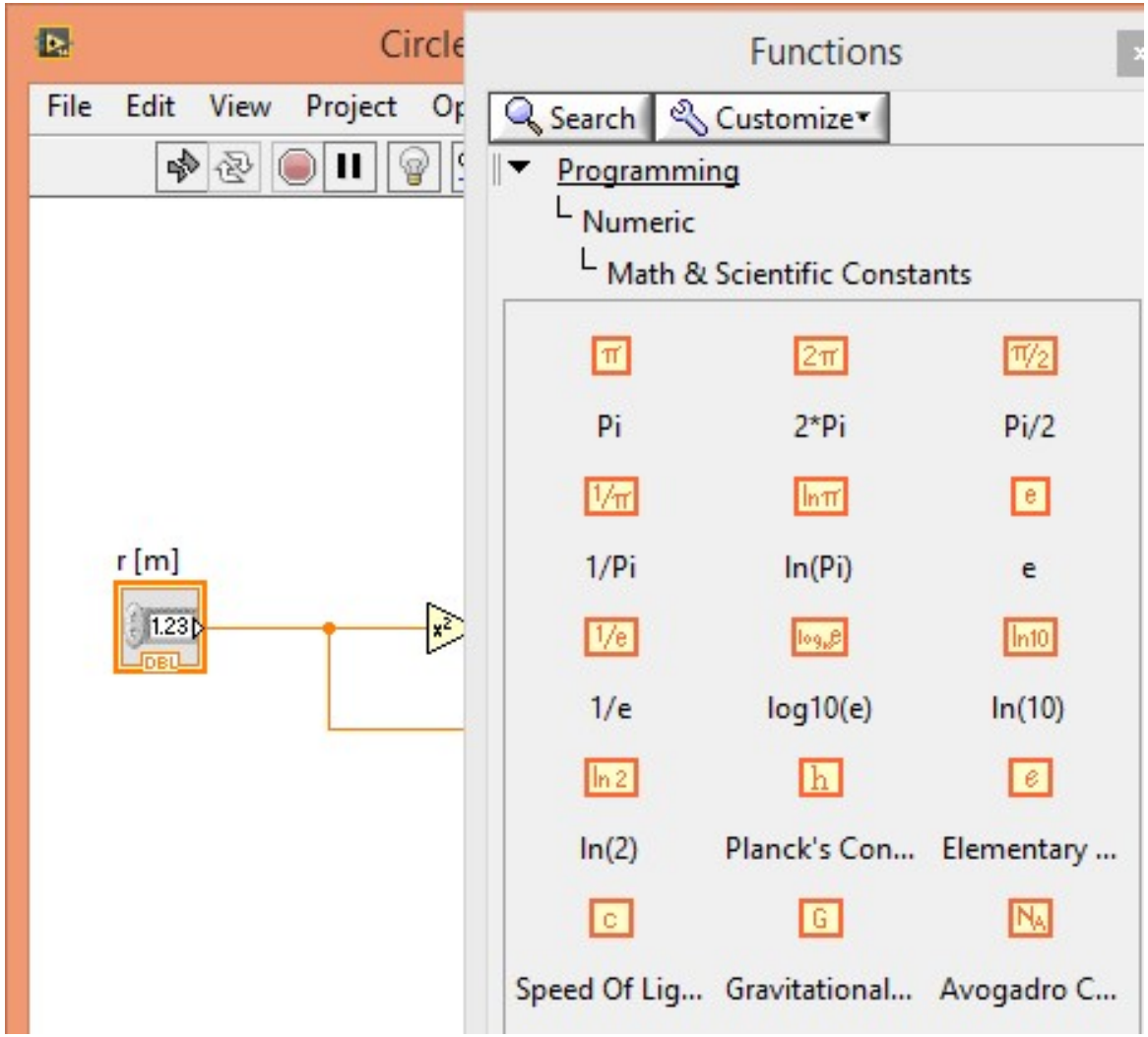
Context Help

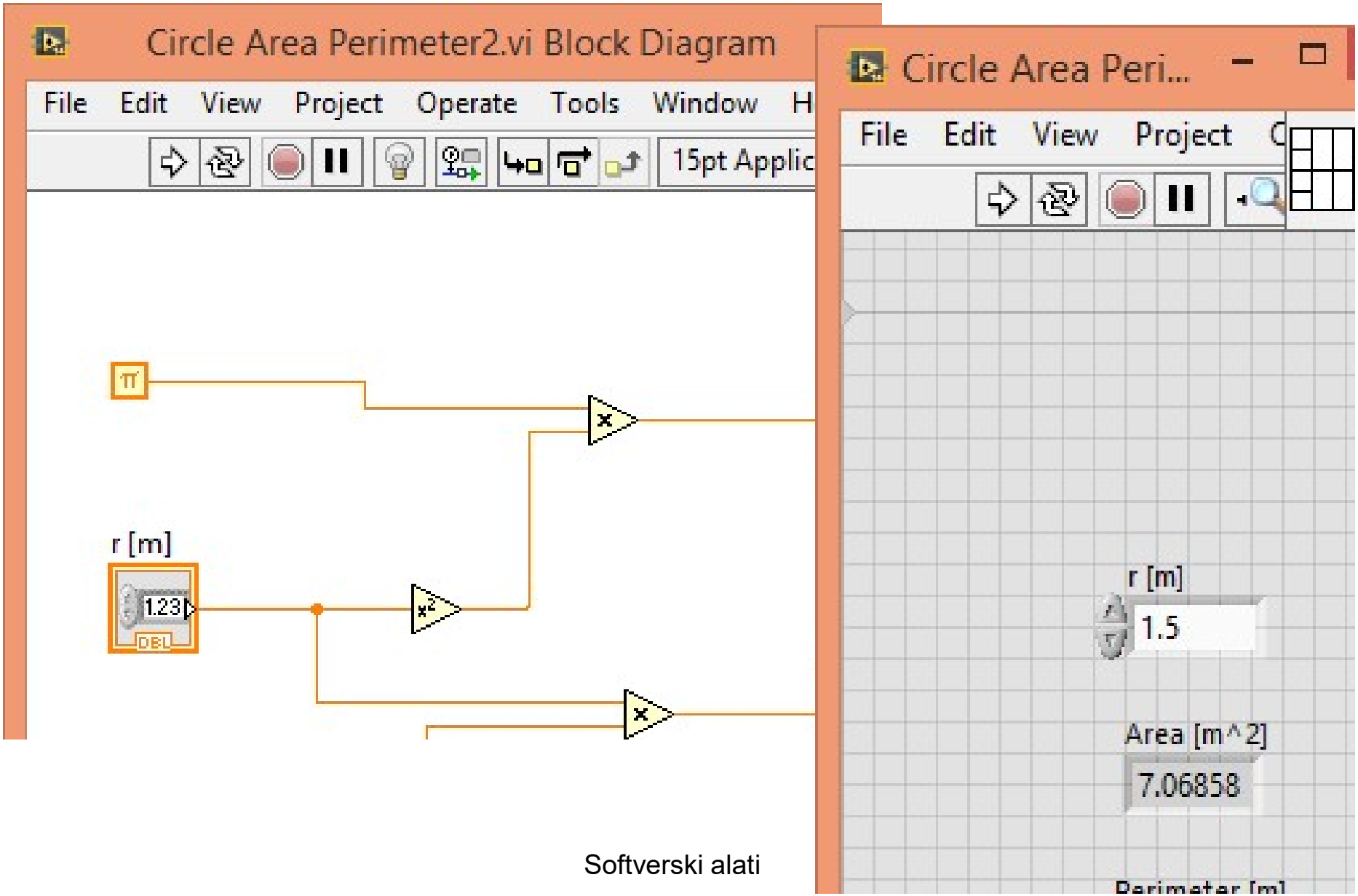
Ctrl-H

When you hover over any block or connector, the Context Help will provide a brief description of its function or its type, depending on context

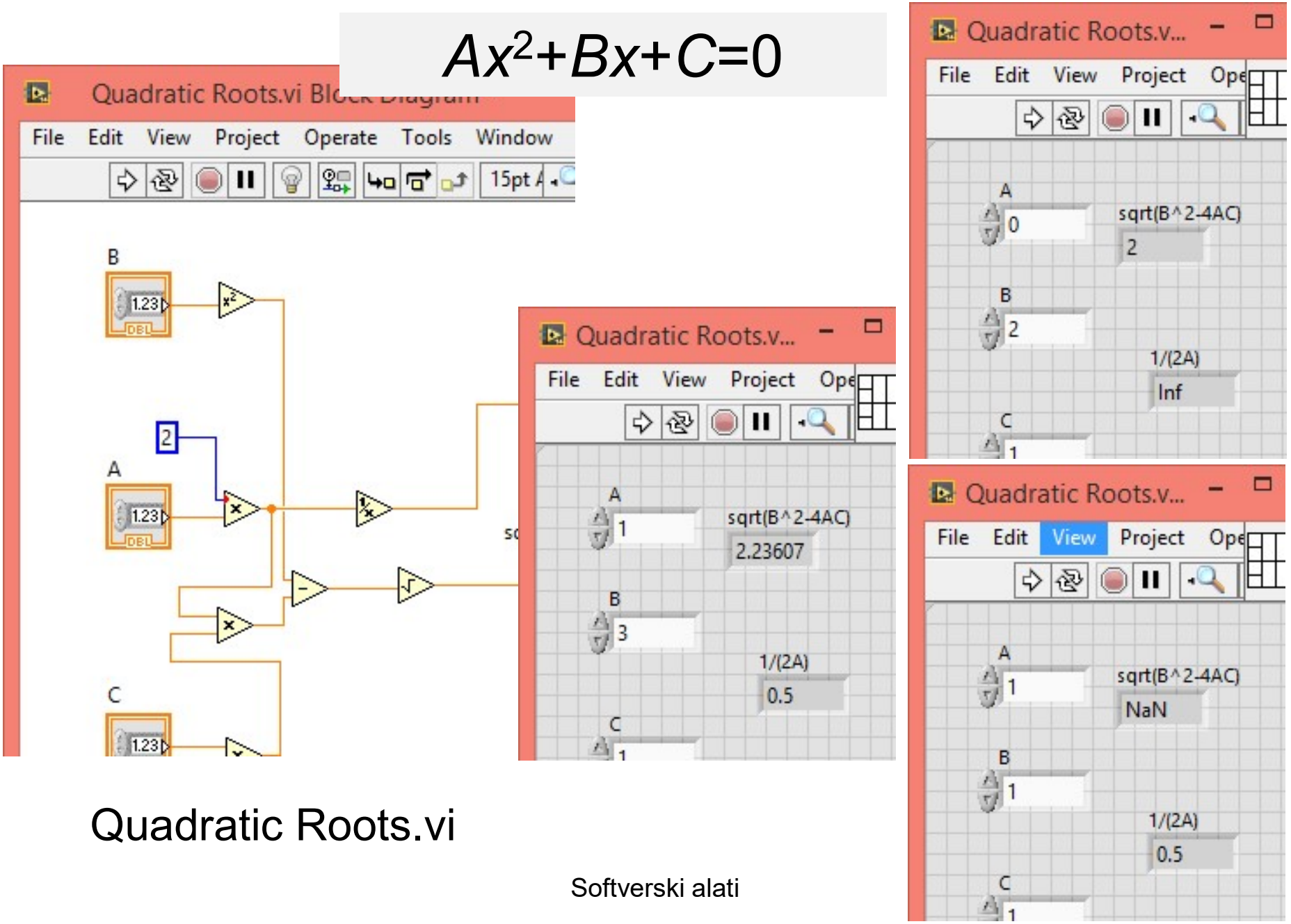


π 2π

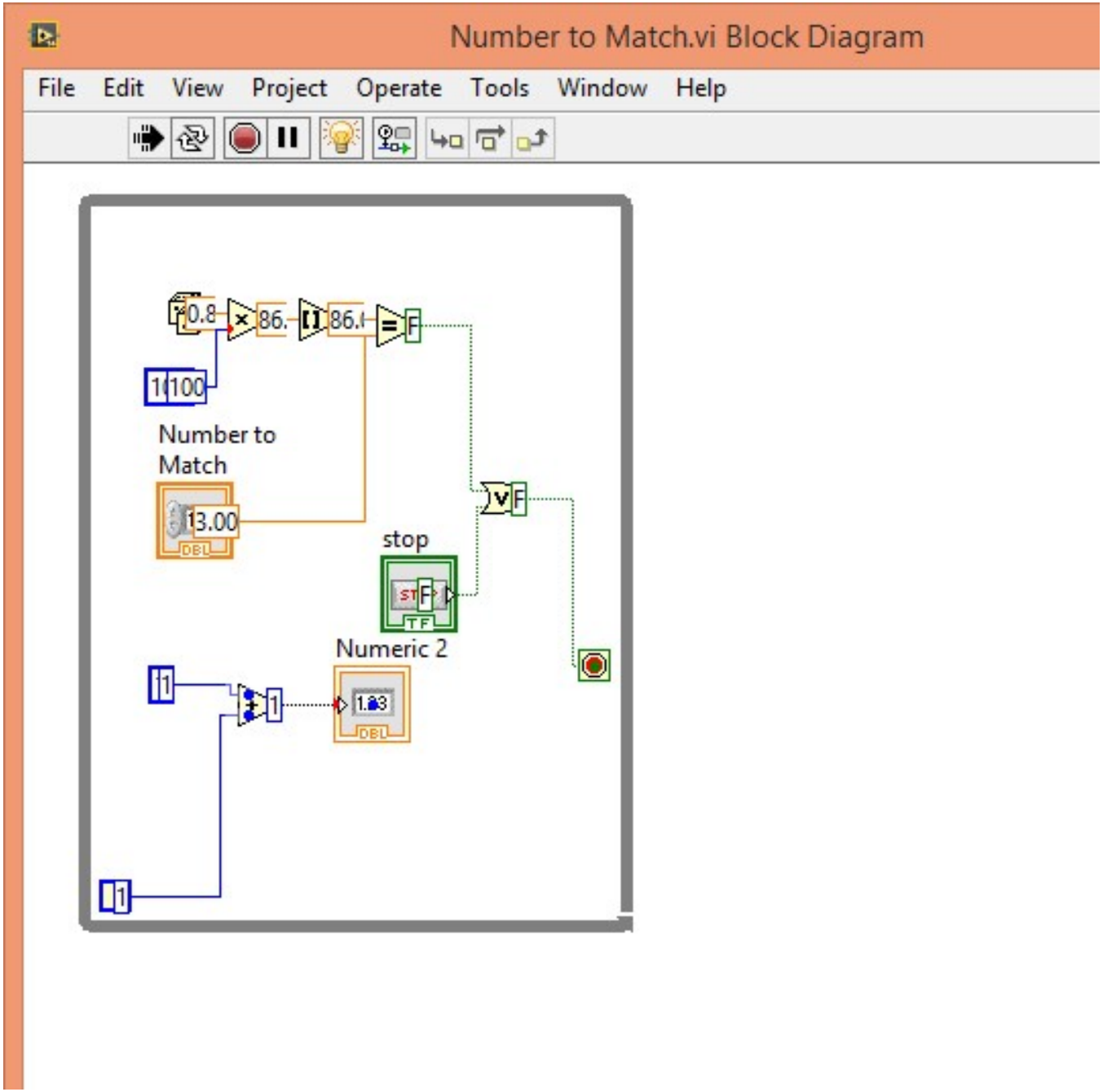

Circle
File Edit View Project Op
r [m]
1.23
DBL
Functions
Search
Customize
Programming
Numeric
Math & Scientific Constants
Pi
2*Pi
Pi/2
1/Pi
ln(Pi)
e
1/e
log10(e)
ln(10)
ln(2)
Planck's Con...
Elementary ...
Speed Of Lig...
Gravitational...
Avogadro C...


Circle Area Perimeter2.vi Block Diagram
File Edit View Project Operate Tools Window H
15pt Applic
r [m]
1.23
DBL
Circle Area Peri...
File Edit View Project
r [m]
1.5
Area [m^2]
7.06858

$$Ax^2+Bx+C=0$$



Quadratic Roots.vi


Number to Match.vi Block Diagram
File Edit View Project Operate Tools Window Help
0.8
86.
86.
F
100
Number to
Match
13.00
DBL
stop
TF
Numeric 2
1.83
DBL

LabVIEW - Example VI

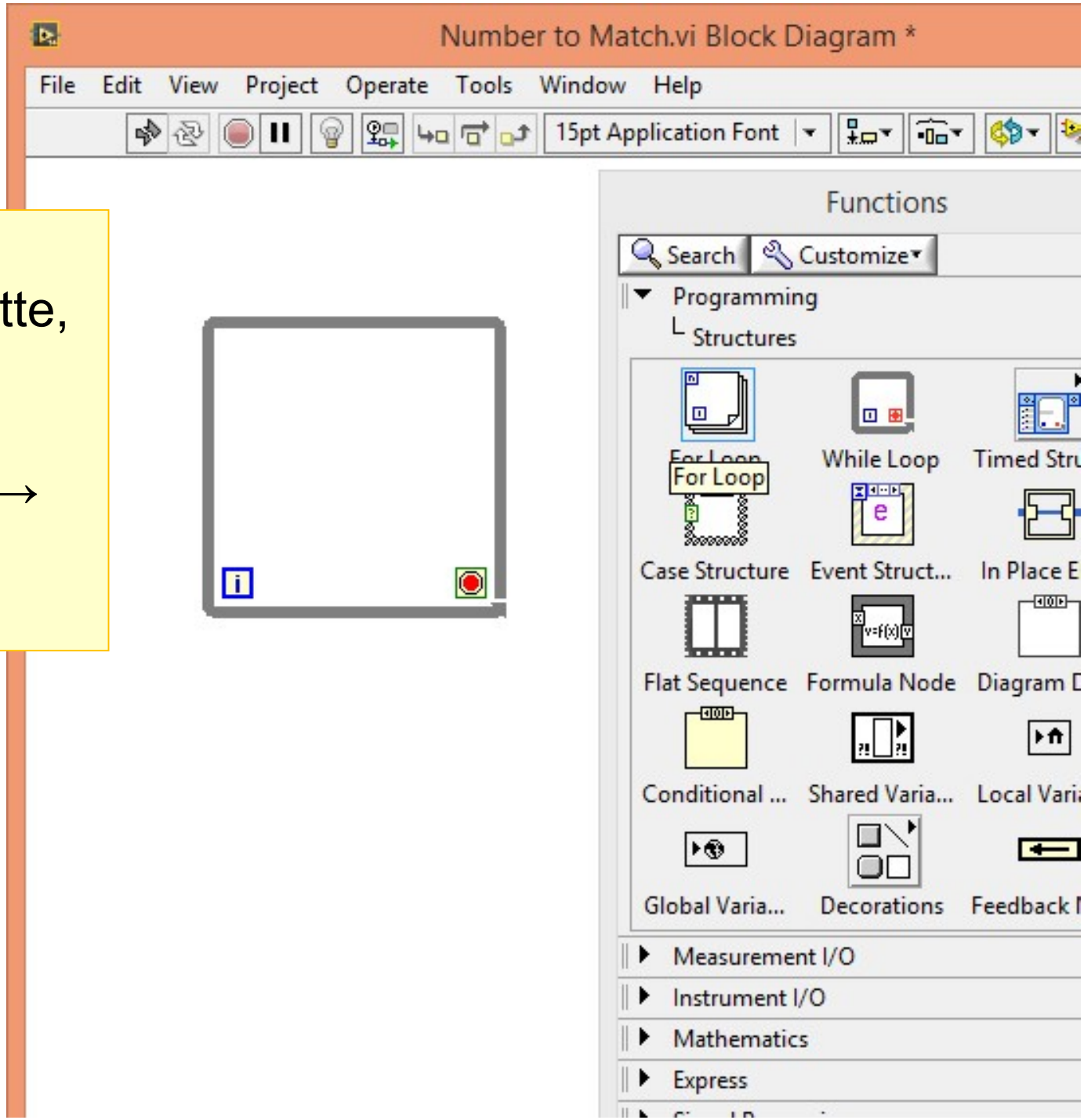
1. Open LabVIEW
2. clicking on Blank VI in the LabVIEW Getting Started
3. Save the VI as Number to Match.vi
    1. Select File → Save
    2. Navigate to the location to save
    3. Name the VI Number to Match.vi
    4. Click OK

- use of a While Loop structure
- Generating a random integer between 0 and 100 in a loop untilit matches a number defined by the user

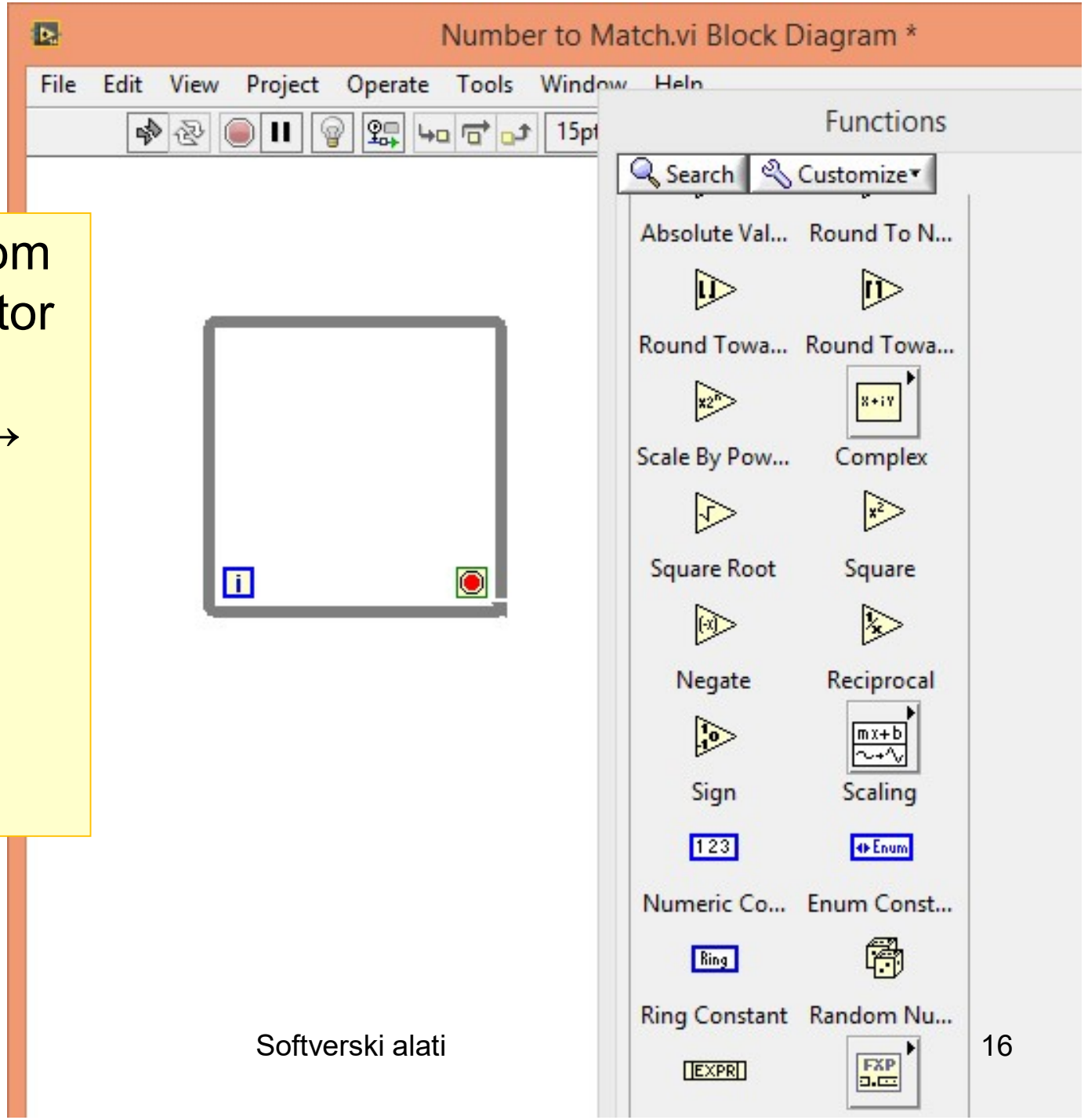
LabVIEW - Example VI

- Create a random number generator, to generate integers between 0 and 100 inclusive, in a While Loop

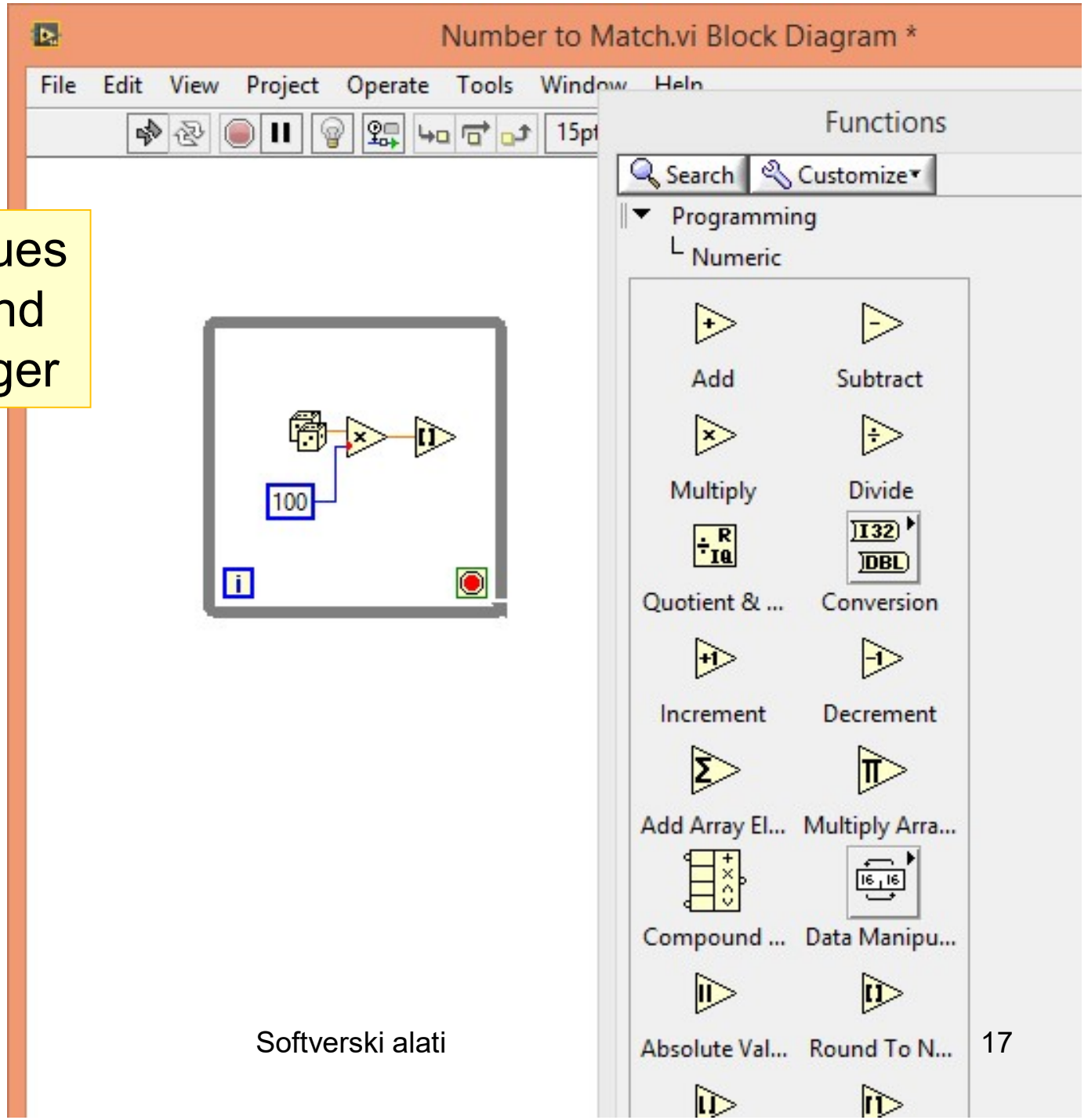
From the Functions palette, place a While Loop from the Programming → Structures subpalette



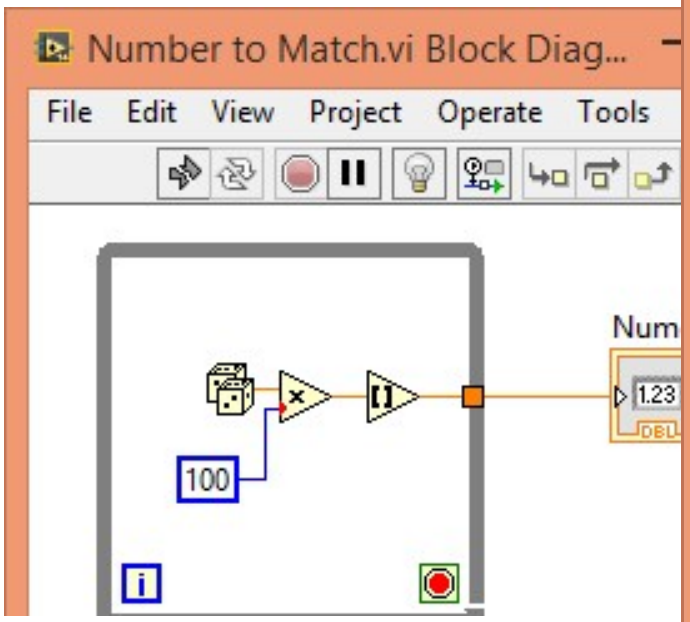
Using the random number generator found in the Programming → Numeric subpalette, generate a random integer between 0 and 100

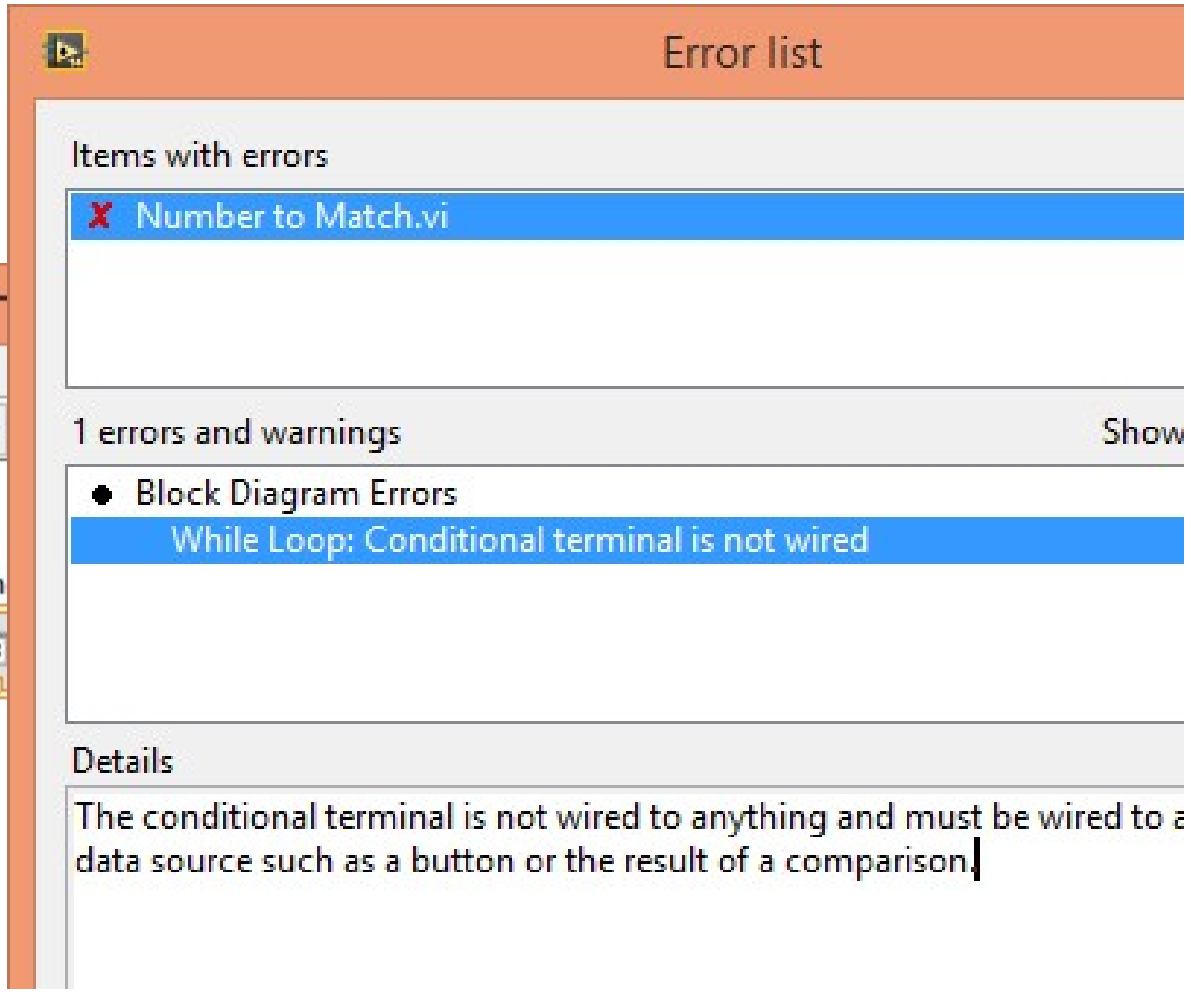


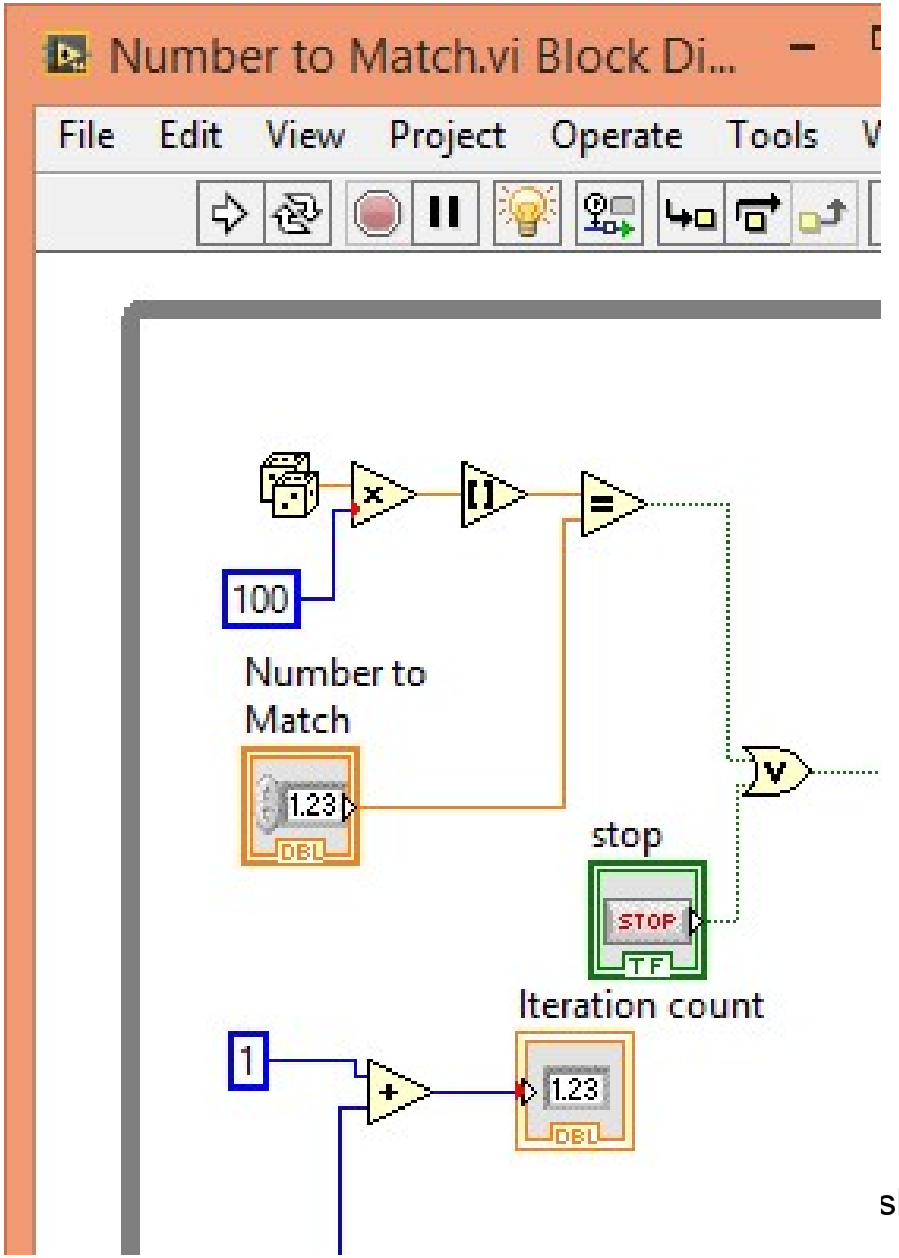
Multiply the values by 100 and round them to an integer

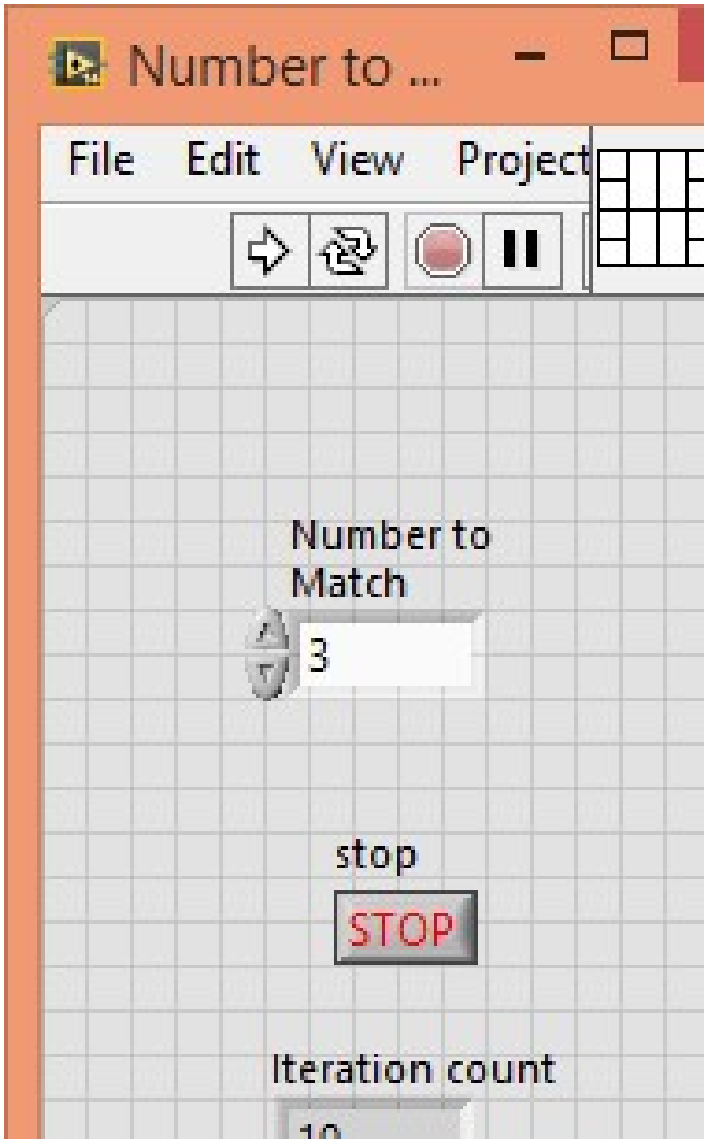


Multiply the values by 100 and round them to an integer

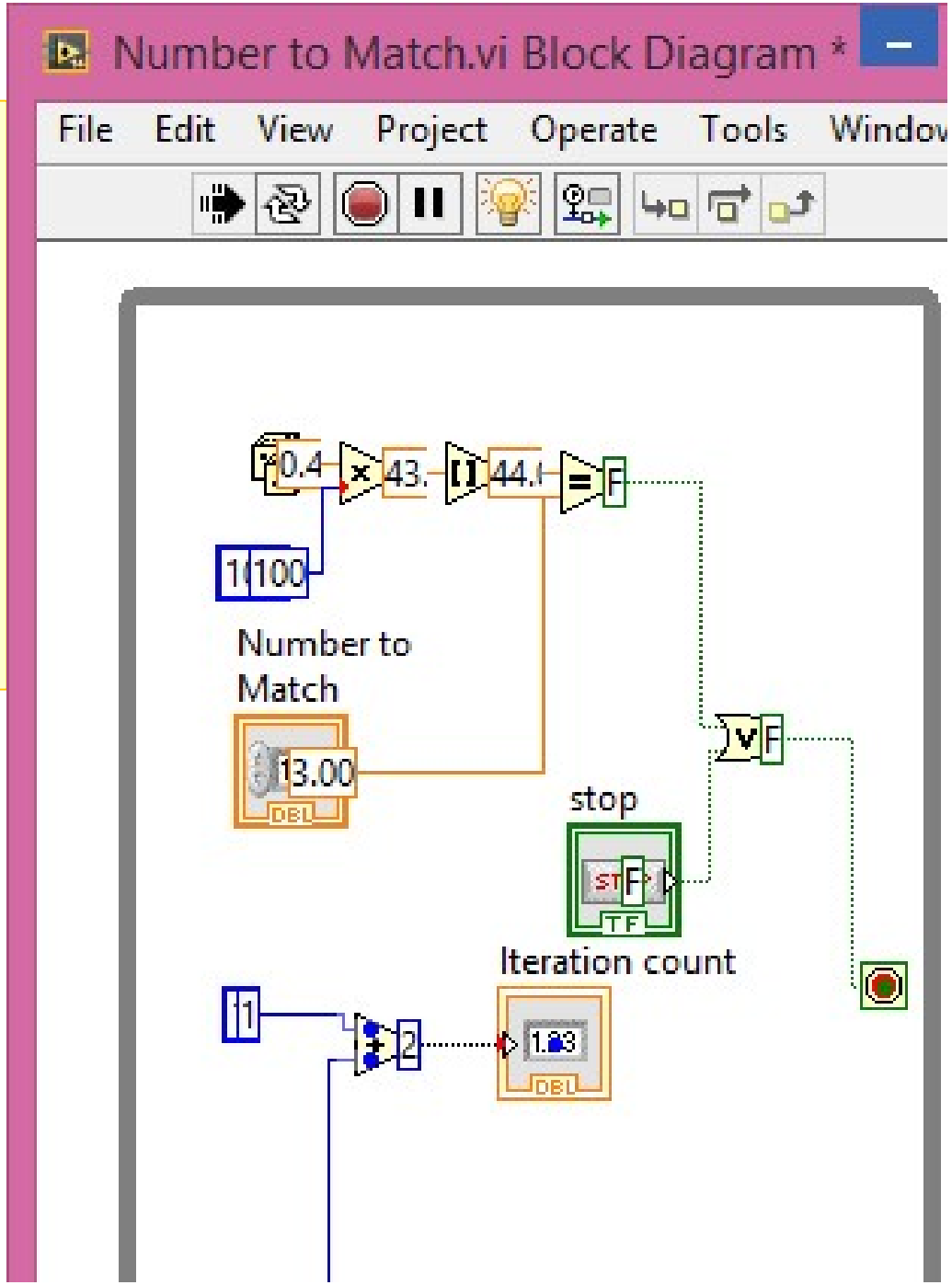





Number to Match.vi Block Di...
File Edit View Project Operate Tools
100
Number to Match
1.23
DBL
stop
STOP
TF
Iteration count
1
1.23
DBL


Number to ...
File Edit View Project
Number to Match
3
stop
STOP
Iteration count

Select the Highlight Execution button in the toolbar of the block diagram, and run the VI while viewing the block diagram



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Ova prezentacija je nekomercijalna.
Slajdovi mogu da sadrže materijale preuzete sa Interneta, stručne i naučne građe, koji su zaštićeni Zakonom o autorskim i srodnim pravima.
Ova prezentacija se može koristiti samo privremeno tokom usmenog izlaganja nastavnika u cilju informisanja i upućivanja studenata na dalji stručni, istraživački i naučni rad i u druge svrhe se ne sme koristiti –
Član 44 - Dozvoljeno je bez dozvole autora i bez plaćanja autorske naknade za nekomercijalne svrhe nastave:
(1) javno izvođenje ili predstavljanje objavljenih dela u obliku neposrednog poučavanja na nastavi;
- ZAKON O AUTORSKOM I SRODNIM PRAVIMA ("Sl. glasnik RS", br. 104/2009 i 99/2011)