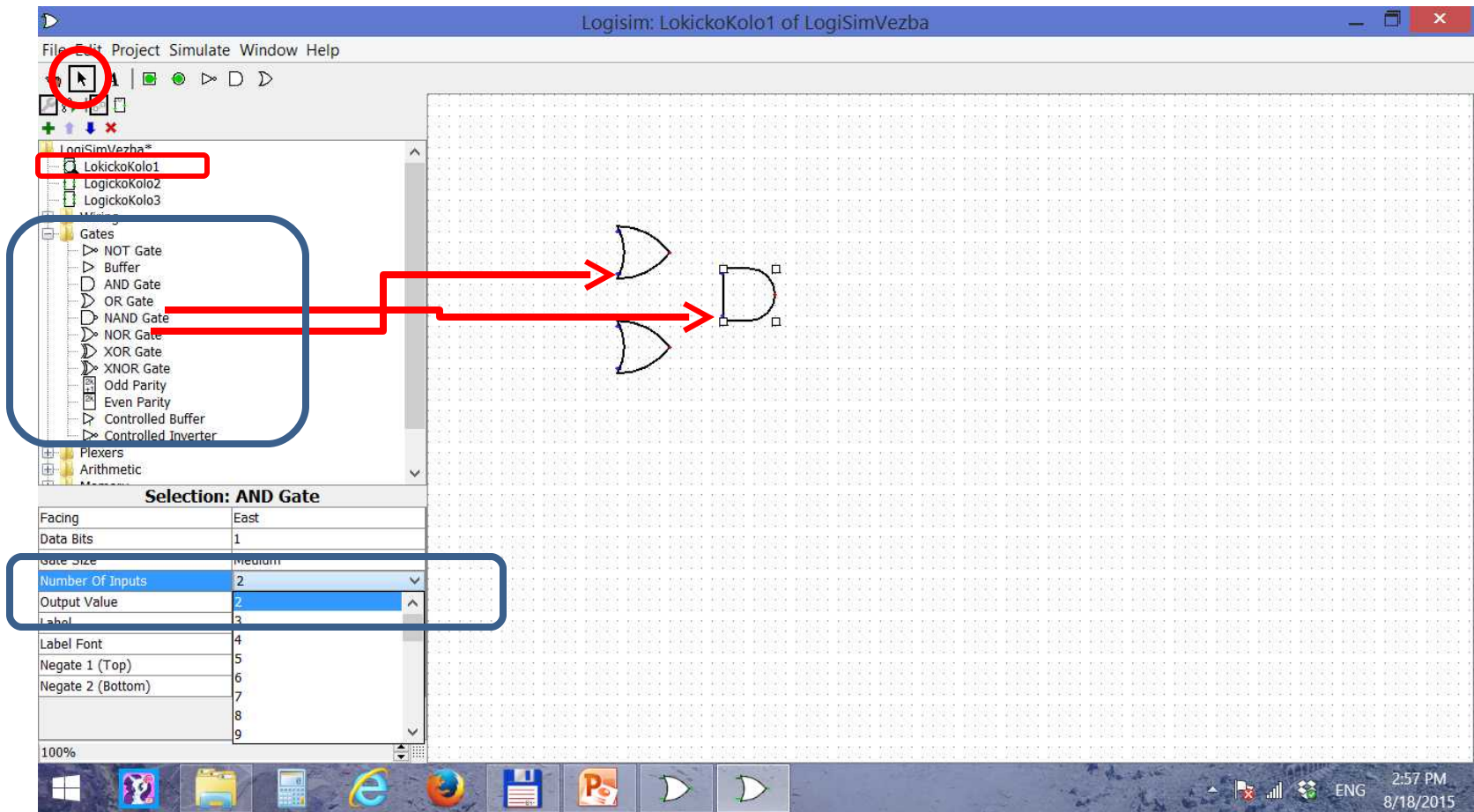


LogiSim

LogiSim



Logisim: Lo

File Edit Project Simulate Window Help

Selection: Pin

| | |
|----------------|--------------------|
| Facing | South |
| Output? | No |
| Data Bits | 1 |
| Three-state? | No |
| Pull Behavior | Unchanged |
| Label | x2 |
| Label Location | North |
| Label Font | SansSerif Plain 12 |

Logisim: LokickoKolo1 of

File Edit Project Simulate Window Help

LogiSimVezba*

- LokickoKolo1
- LogickoKolo2
- LogickoKolo3
- Wiring
 - Splitter
 - Pin
 - Probe
 - Tunnel
 - Pull Resistor
 - Clock
 - Constant
 - Power
 - Ground
 - Transistor
 - Transmission Gate
 - Bit Extender
- Gates
- Plexers
- Arithmetic

Selection: Pin

| | |
|----------------|--------------------|
| Facing | West |
| Output? | Yes |
| Data Bits | 1 |
| Three-state? | Yes |
| Pull Behavior | Unchanged |
| Label | y |
| Label Location | East |
| Label Font | SansSerif Plain 12 |



Letnja_skola_KI*

- LogickoKolo1
- LogickoKolo2
- LogickoKolo3**

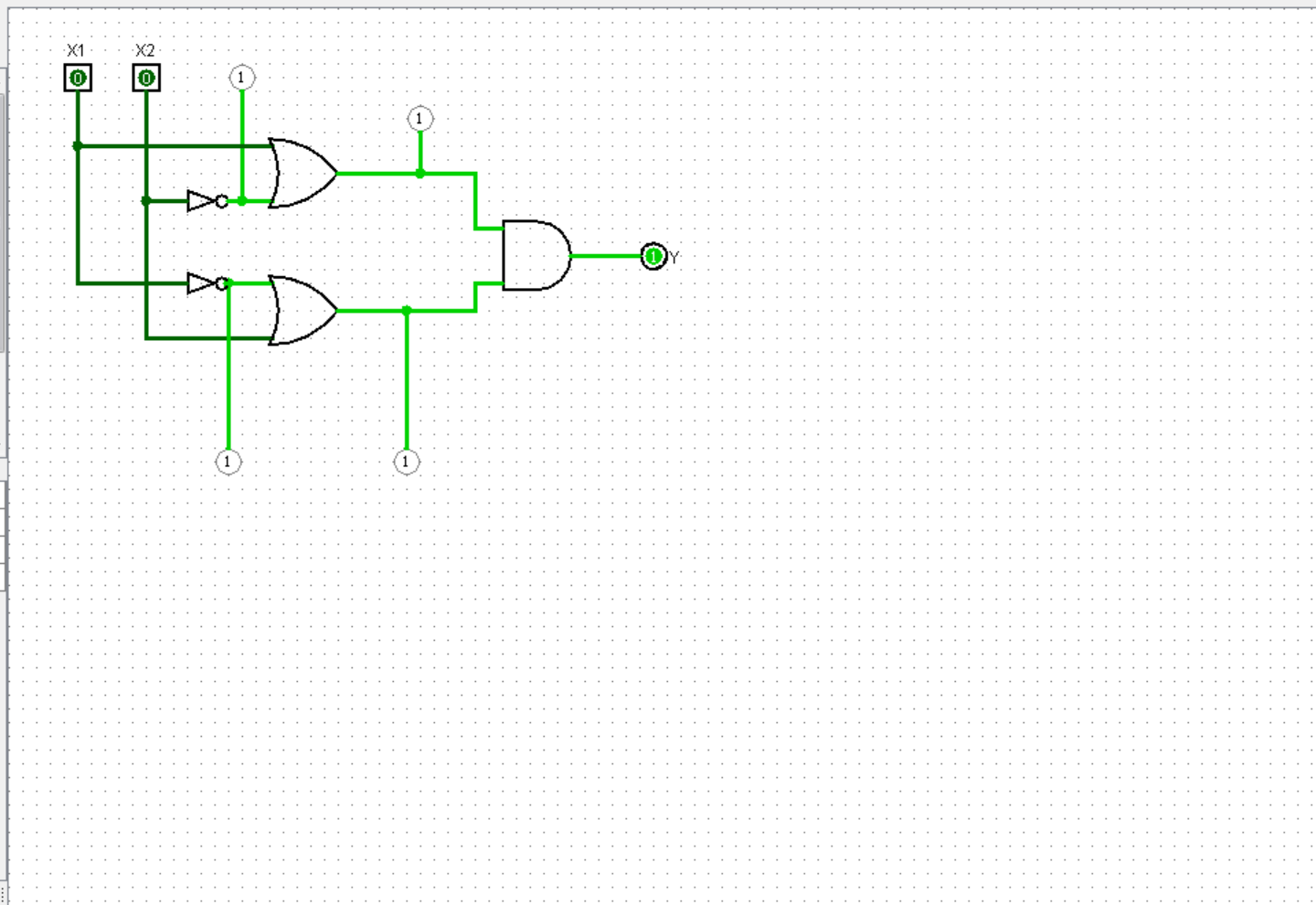
Wiring

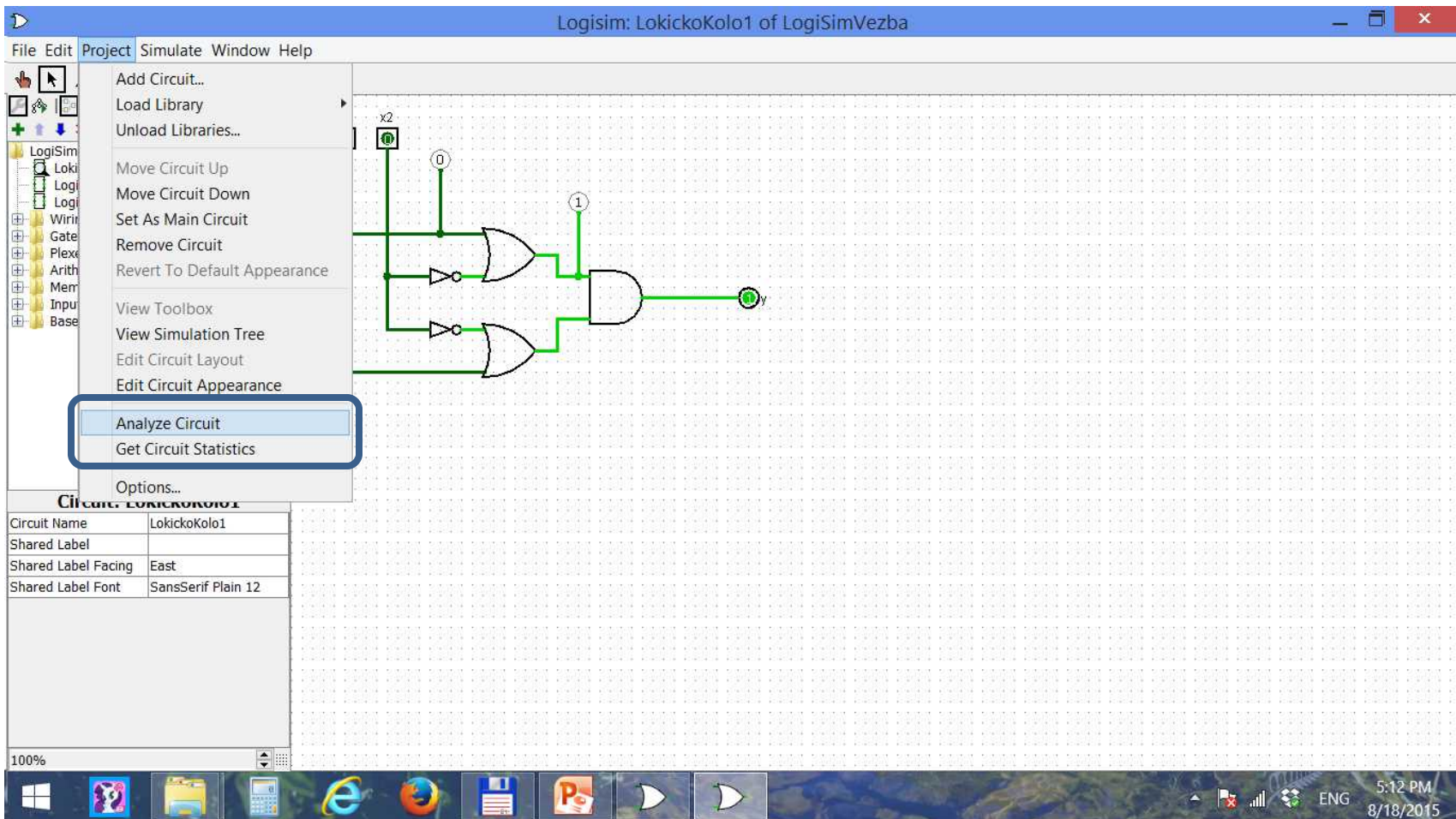
- Splitter
- Pin
- Probe
- Tunnel
- Pull Resistor
- Clock
- Constant
- Power
- Ground
- Transistor
- Transmission Gate
- Bit Extender

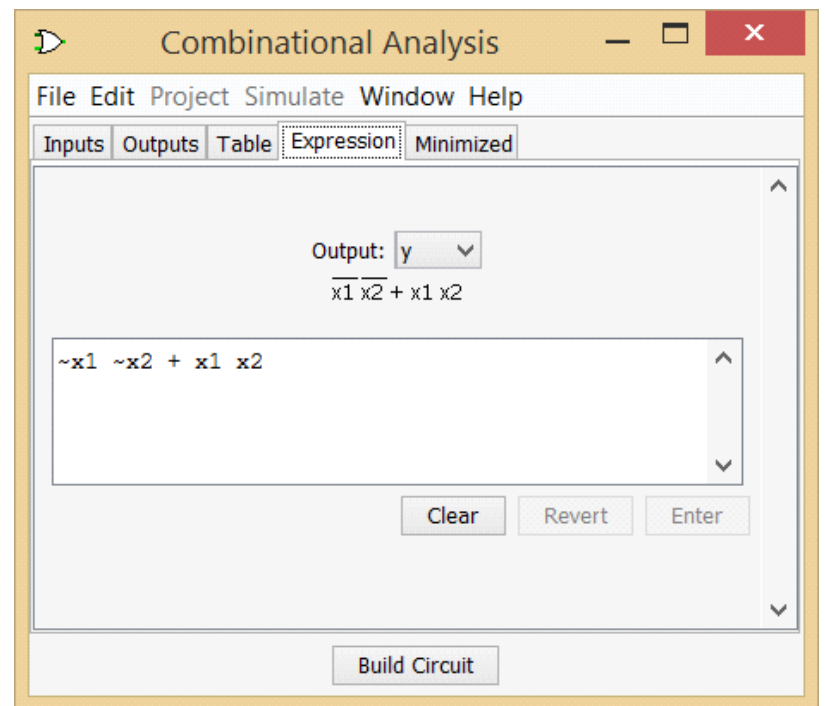
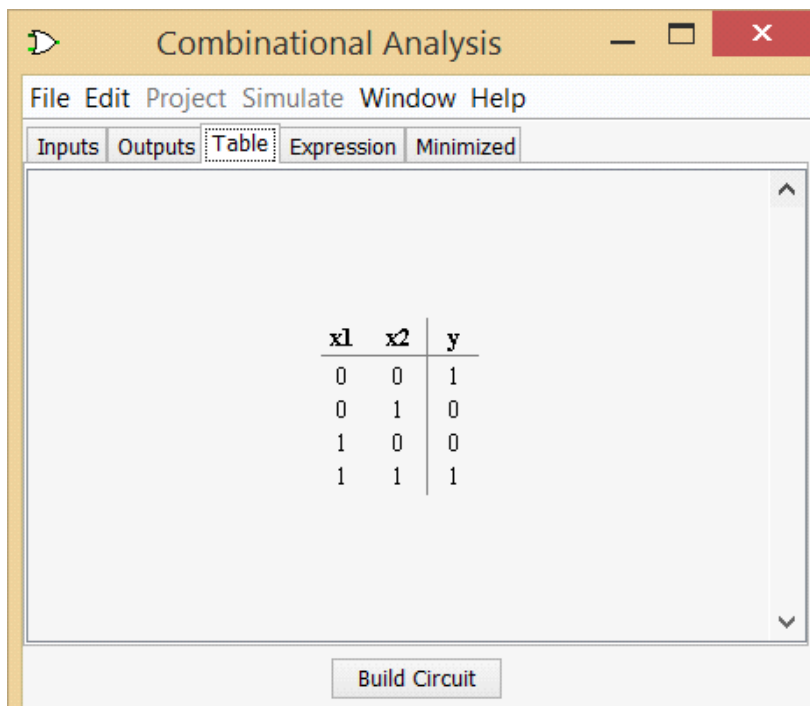
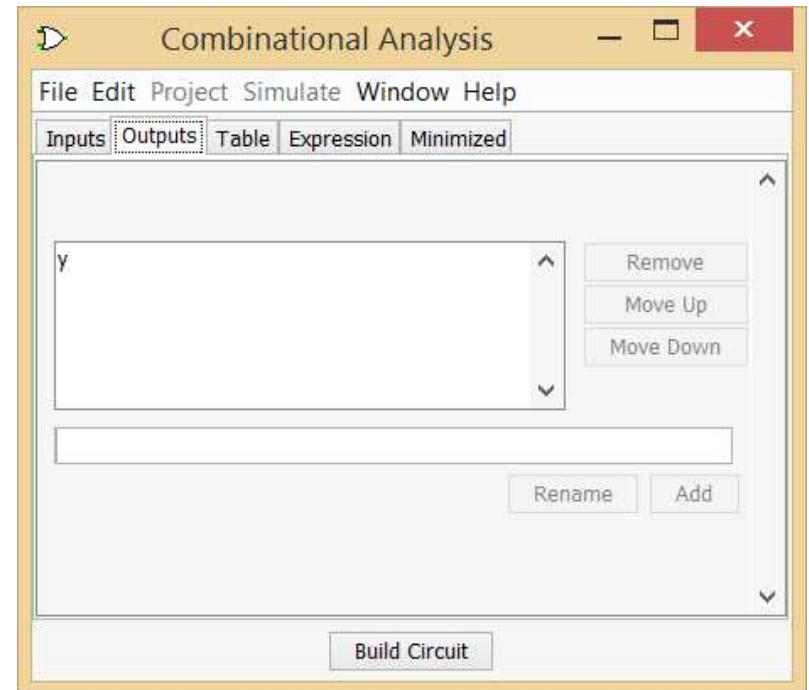
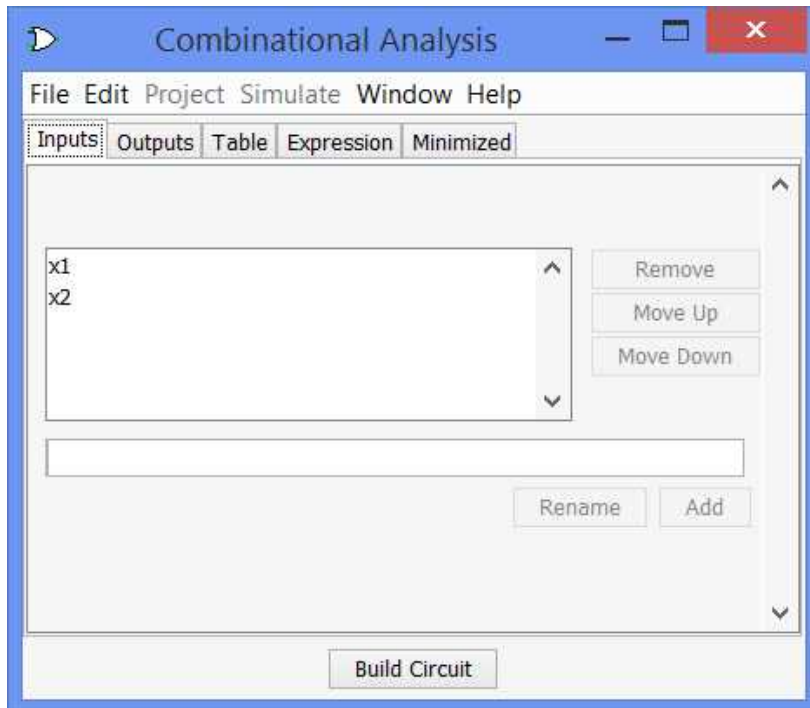
Gates

Circuit: LogickoKolo3

| | |
|---------------------|--------------------|
| Circuit Name | LogickoKolo3 |
| Shared Label | |
| Shared Label Facing | East |
| Shared Label Font | SansSerif Plain 12 |







Combinational Analysis

File Edit Project Simulate Window Help

Inputs Outputs Table Expression Minimized

Output:

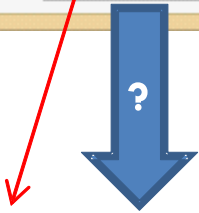
Format:

| | | x2 | |
|----|---|----|---|
| | | 0 | 1 |
| x1 | 0 | 1 | 0 |
| | 1 | 0 | 1 |

$\overline{x1} \overline{x2} + x1 x2$

Set As Expression

Build Circuit



fminDNF

Combinational Analysis

File Edit Project Simulate Window Help

Inputs Outputs Table Expression Minimized

Output:

Format:

| | | x2 | |
|----|---|----|---|
| | | 0 | 1 |
| x1 | 0 | 1 | 0 |
| | 1 | 0 | 1 |

$(x1 + \overline{x2}) (\overline{x1} + x2)$

Set As Expression

Build Circuit



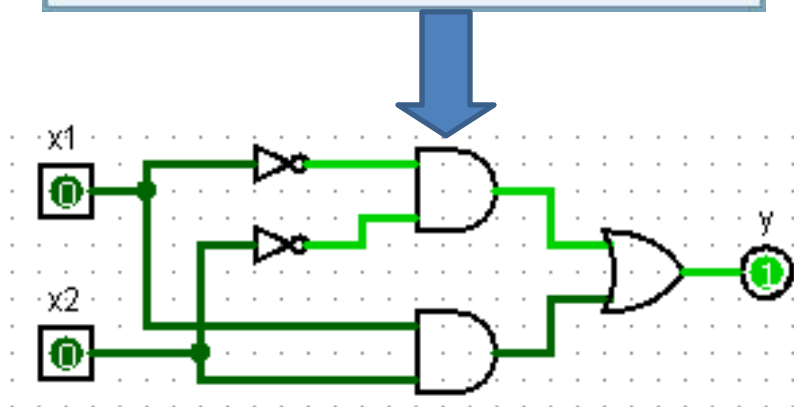
fminKNF

Build Circuit

Destination Project: LogiSimVezba
Circuit Name: LogickoKolo2

☒ Use Two-Input Gates Only
☐ Use NAND Gates Only

OK Cancel

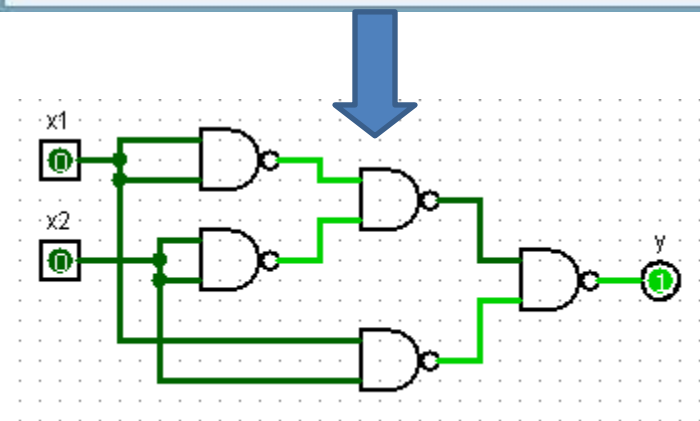


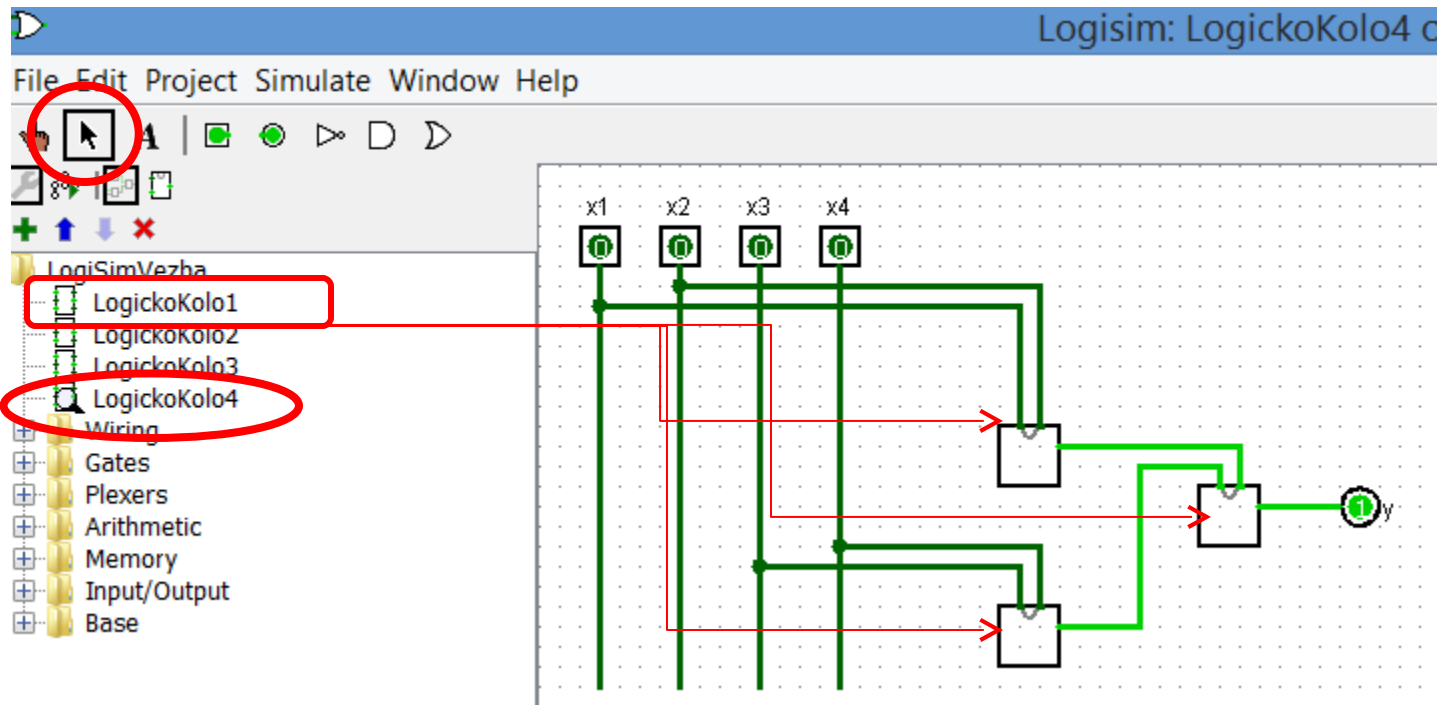
Build Circuit

Destination Project: LogiSimVezba
Circuit Name: LogickoKolo3

☐ Use Two-Input Gates Only
☒ Use NAND Gates Only

OK Cancel





Logisim: LogickoKolo4 of LogiSimVezba

File Edit Project Simulate Window Help

LogiSimVezba
LogickoKolo1
LogickoKolo2
LogickoKolo3
LogickoKolo4

Edit Circuit Layout
Edit Circuit Appearance
Analyze Circuit
Get Circuit Statistics
Set As Main Circuit
Remove Circuit

Circuit: LogickoKolo4

| | |
|---------------------|--------------------|
| Circuit Name | LogickoKolo4 |
| Shared Label | |
| Shared Label Facing | East |
| Shared Label Font | SansSerif Plain 12 |

100%

Windows taskbar: 6:11 PM 8/18/2015

Combinational Analysis

File Edit Project Simulate Window Help

Inputs Outputs Table Expression Minimized

| x1 | x2 | x3 | x4 | y |
|----|----|----|----|---|
| 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 |

Build Circuit

Combinational Analysis

File Edit Project Simulate Window Help

Inputs Outputs Table Expression Minimized

Output: y

Format: Sum of products

x3, x4

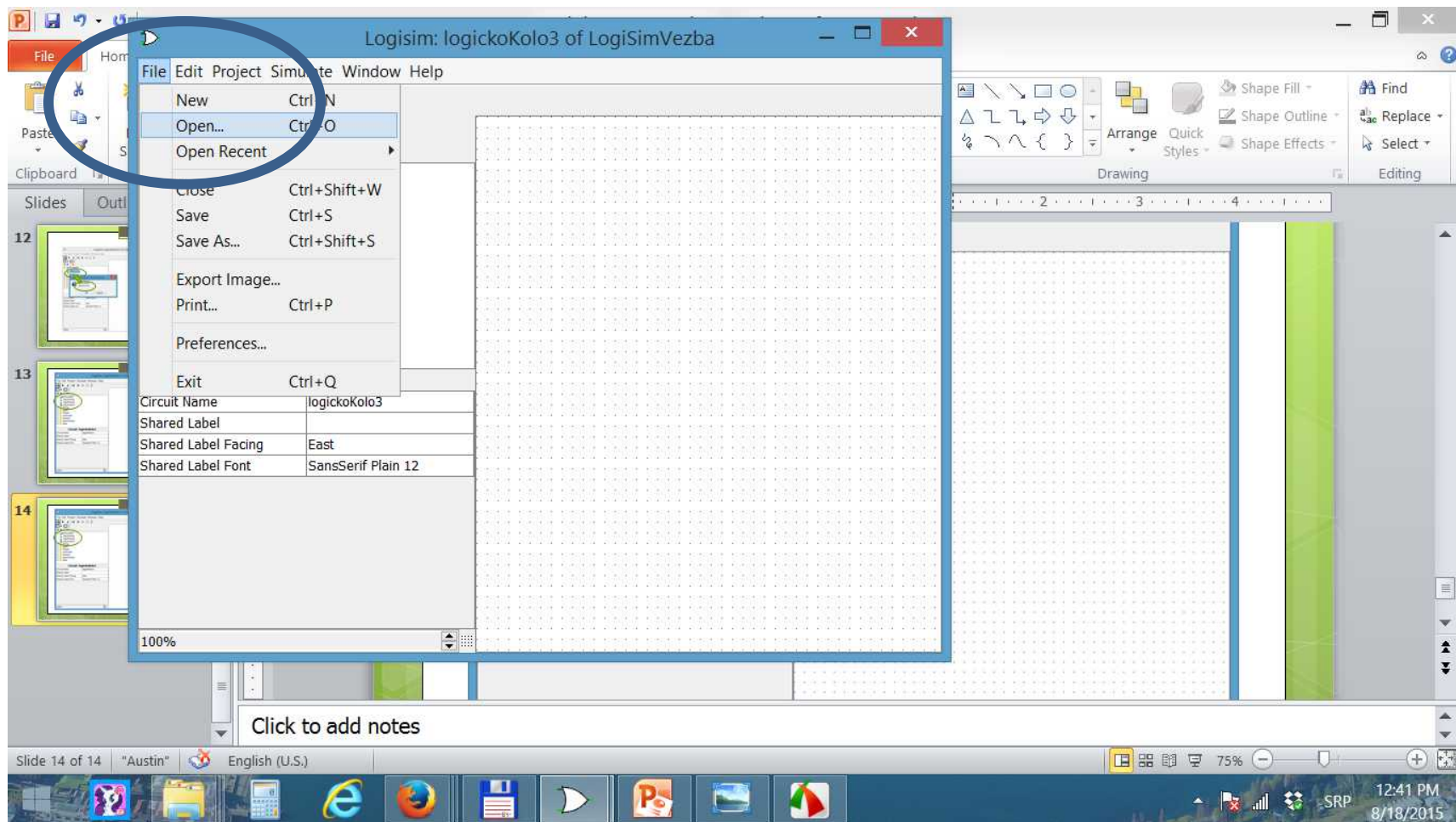
| | 00 | 01 | 11 | 10 |
|--------|-----|-----|-----|----|
| x1, x2 | 00 | 1 0 | 1 0 | |
| 01 | 0 1 | 1 0 | 1 1 | |
| 11 | 1 0 | 1 1 | 0 0 | |
| 10 | 0 1 | 0 0 | 1 1 | |

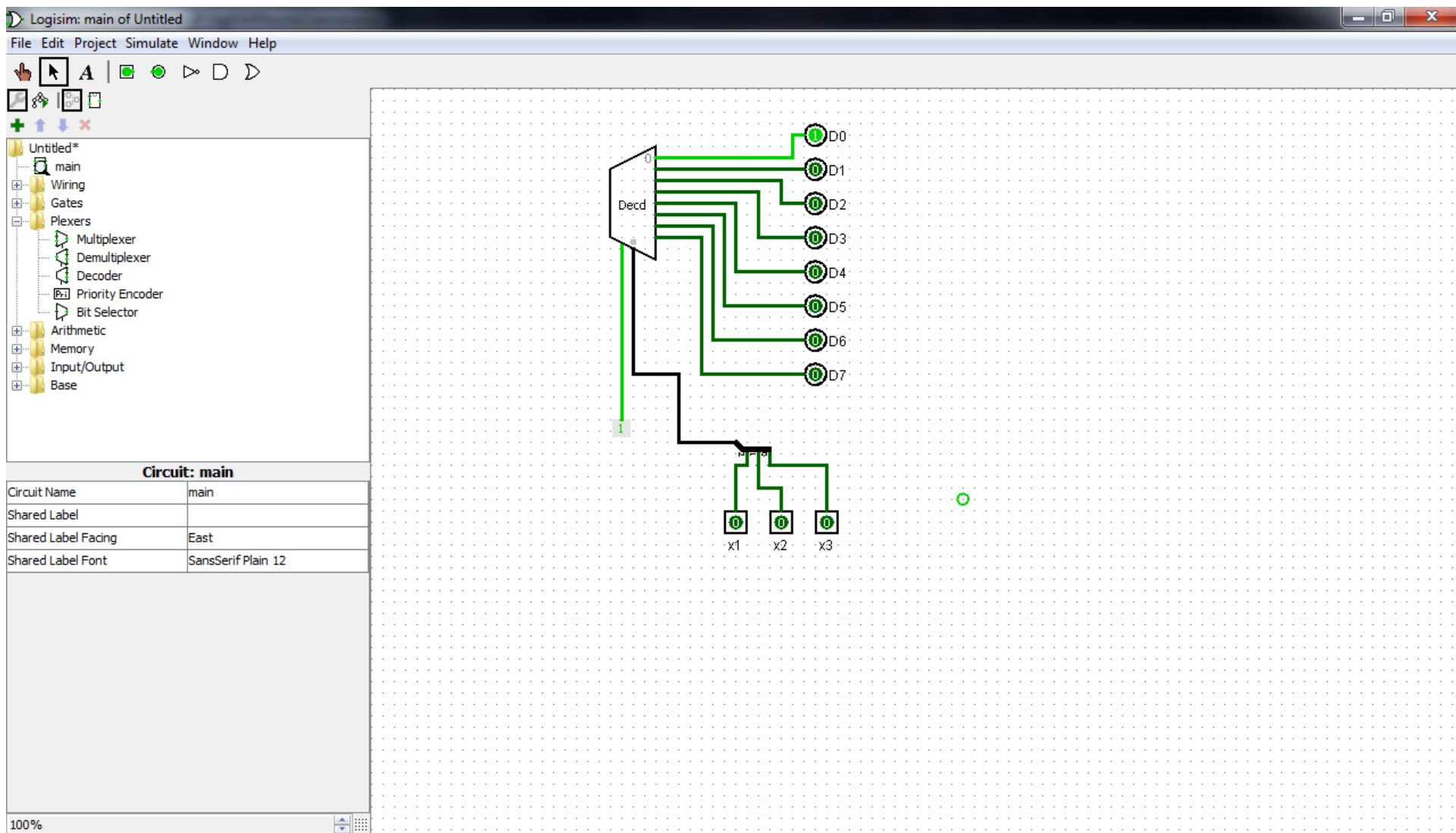
$\overline{x_1} \overline{x_2} \overline{x_3} \overline{x_4} + \overline{x_1} \overline{x_2} x_3 x_4$
 $+ \overline{x_1} x_2 \overline{x_3} \overline{x_4} + \overline{x_1} x_2 x_3 \overline{x_4}$
 $+ x_1 \overline{x_2} \overline{x_3} \overline{x_4} + x_1 \overline{x_2} x_3 \overline{x_4}$
 $+ x_1 x_2 \overline{x_3} \overline{x_4} + x_1 x_2 x_3 x_4$

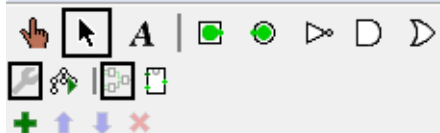
Set As Expression

Build Circuit

Realizovati dekodir 3 - 8







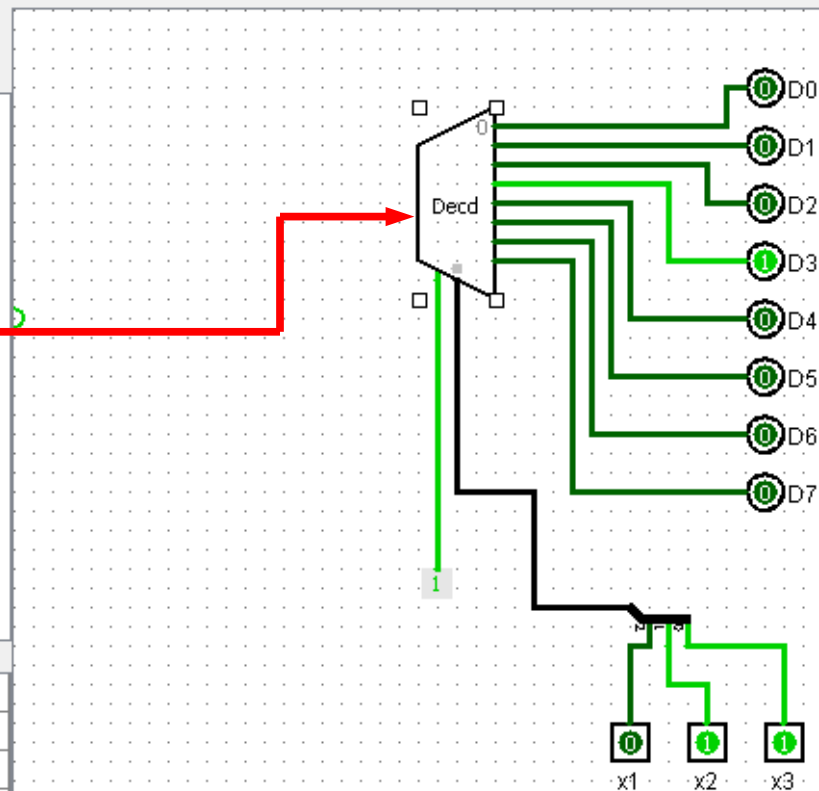
The screenshot shows the Proteus 8.0 SP3 component library. The 'Logic' category is selected, and the 'Decoder' component is highlighted with a red rectangle. The library structure is as follows:

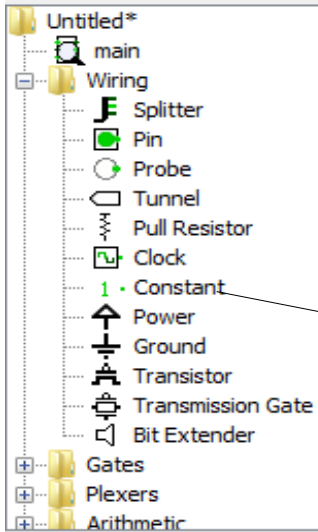
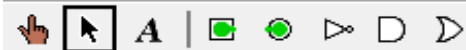
- Untitled*
 - main
 - Wiring
 - Gates
 - Plexers
 - Multiplexer
 - Demultiplexer
 - Decoder**
 - Priority Encoder
 - Bit Selector
 - Arithmetic
 - Memory
 - Input/Output
 - Base

Selection: Decoder

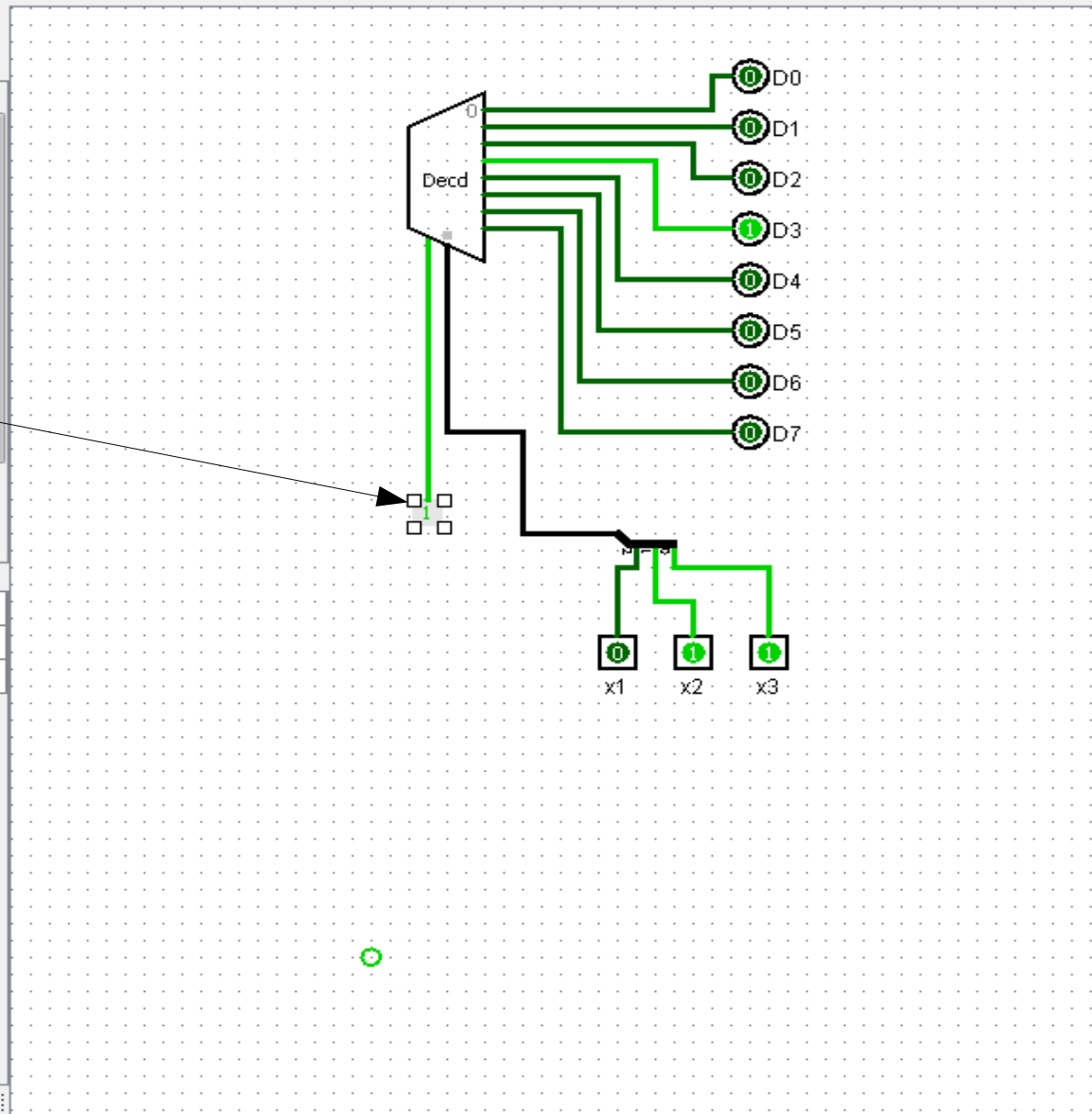
| | |
|-----------------|-------------|
| Facing | East |
| Select Location | Bottom/Left |
| Select Bits | 3 |
| Three-state? | No |
| Disabled Output | Floating |
| Include Enable? | Yes |

100%



**Selection: Constant**

| | |
|-----------|-------|
| Facing | North |
| Data Bits | 1 |
| Value | 0x1 |



Logisim: main of Untitled

File Edit Project Simulate Window Help

Hand Mouse Text Select Run Stop Undo Redo

Component Palette:

- Wiring
 - Splitter
 - Pin
 - Probe
 - Tunnel
 - Pull Resistor
 - Clock
 - Constant
 - Power
 - Ground
 - Transistor
 - Transmission Gate
 - Bit Extender
- Gates
- Plexers
- Arithmetic

Selection: Splitter

| | |
|--------------|-------------|
| Facing | South |
| Fan Out | 3 |
| Bit Width In | 3 |
| Appearance | Left-handed |
| Bit 0 | 0 (Right) |
| Bit 1 | 1 |
| Bit 2 | 2 (Left) |

100%