**SYSTEM DIGITAL**

**MODUL 3: GERBANG LOGIKA**



**By:**

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**FACULTY OF COMMUNICATION AND INFORMATICS**

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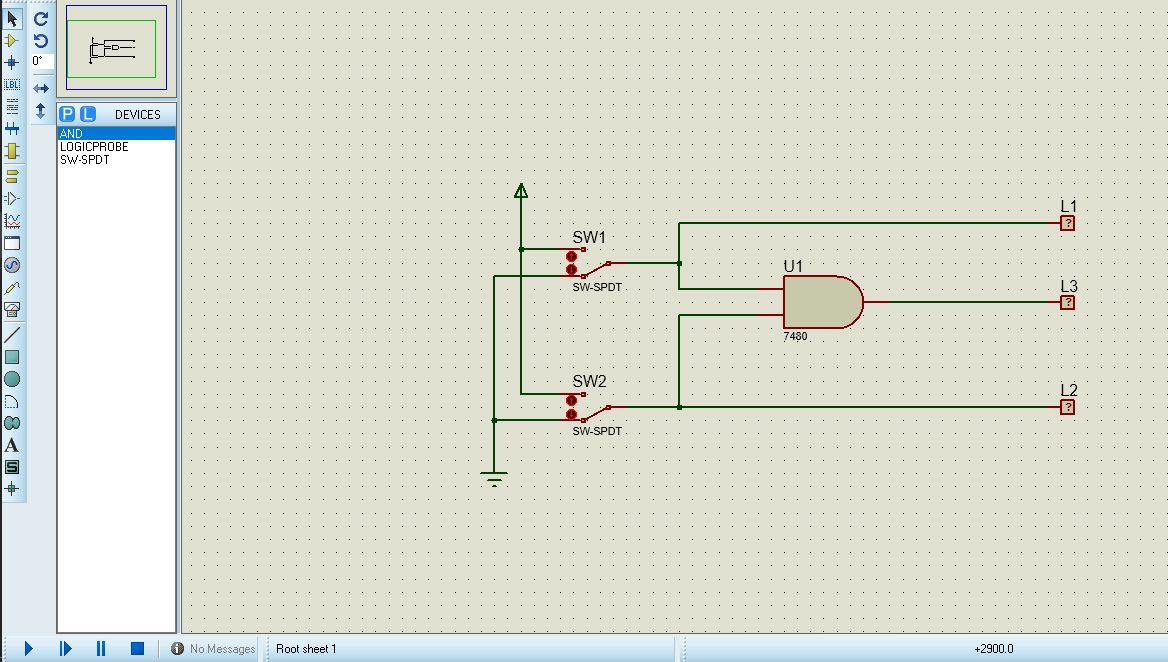
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Class : X

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Exercise 1

1. Make Logic Gates on picture



2. Truth Table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |

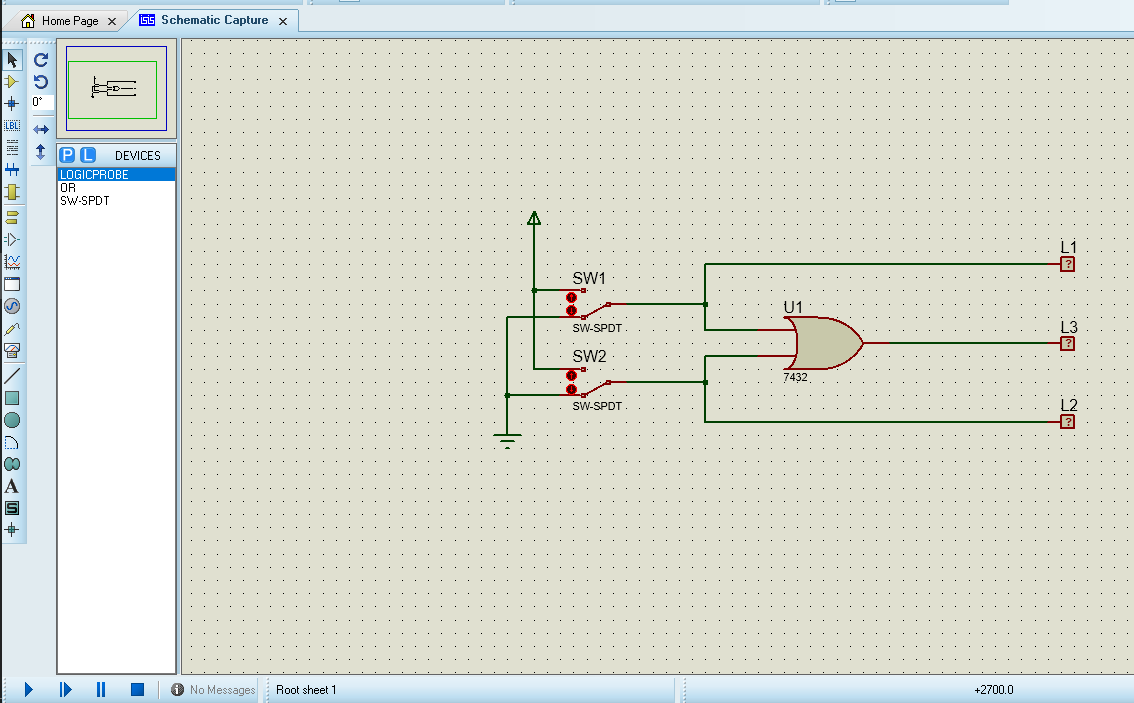
3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |
|  |  |  |  |
|  |  |  |
| L3 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |

Exercise 2

Exercise 2

1. Make Logic Gates on this picture



2. Truth Table.

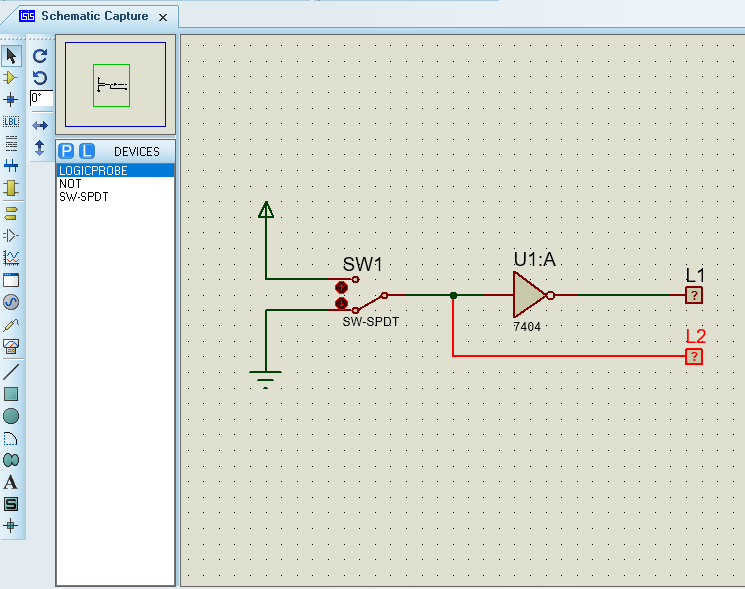
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 |

3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L3 |  |  |  |  |
|  |  |  |  |
|  |  |

Exercise 3

1. Make Logic Gates on this Picture.



2. Truth Table.

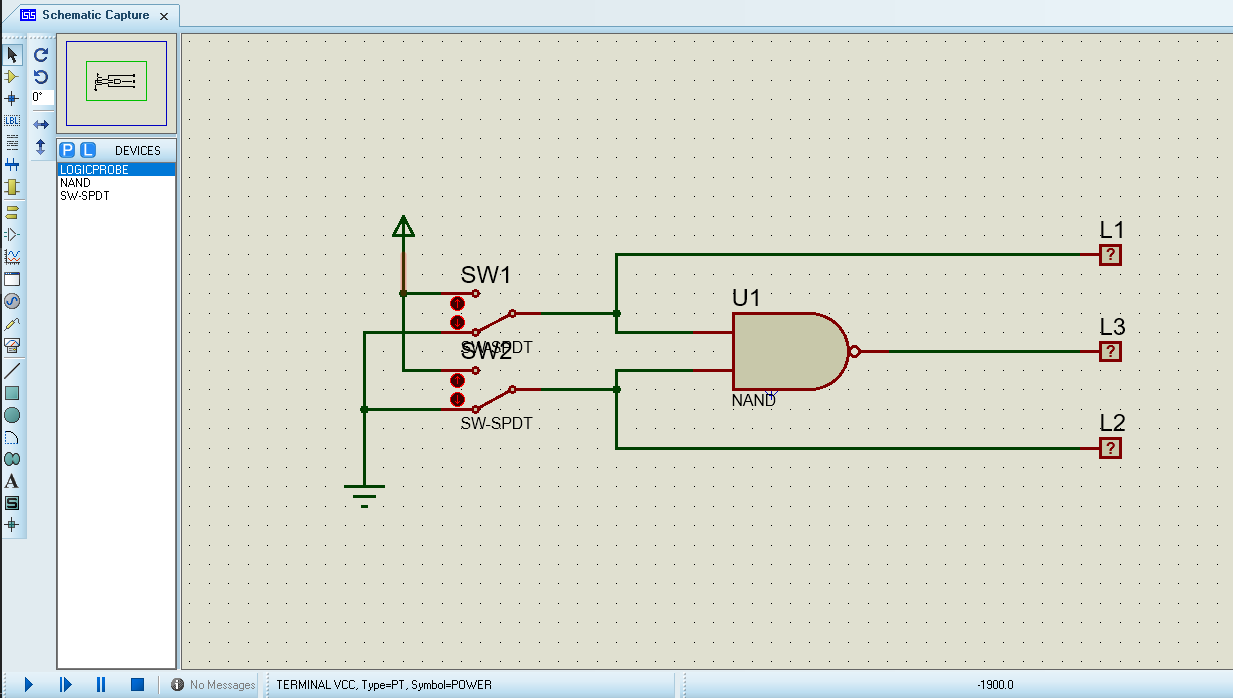
|  |  |  |
| --- | --- | --- |
| S W  1 | L2 | L1 |
| 0 | 0 | 1 |
| 1 | 1 | 0 |

3. Diagram Time.

|  |  |  |
| --- | --- | --- |
| L1 |  |  |
|  |
|  |  |
|  |
| L2 |  |  |
|  |
|  |  |
|  |

Exercise 4

1. Make Logic Gates on this Picture.



2. Truth Table.

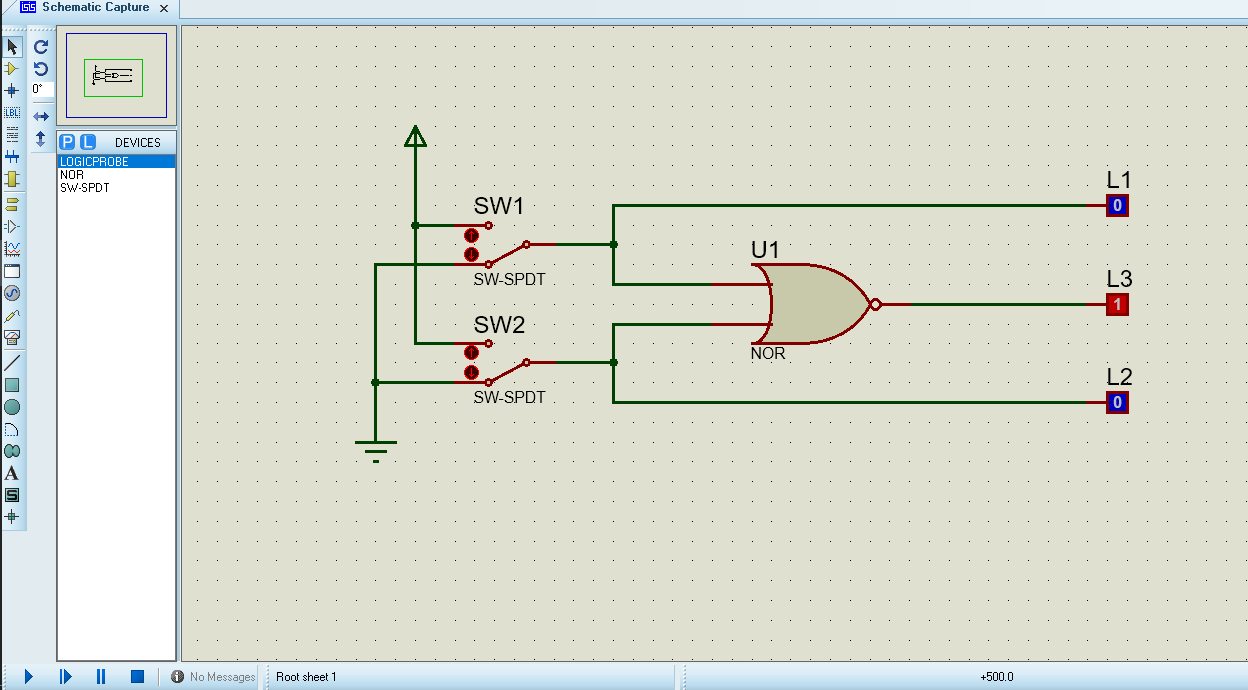
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 |

3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L3 |  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Exercise 5

1. Make Logic Gates on this Picture.



2. Truth Table.

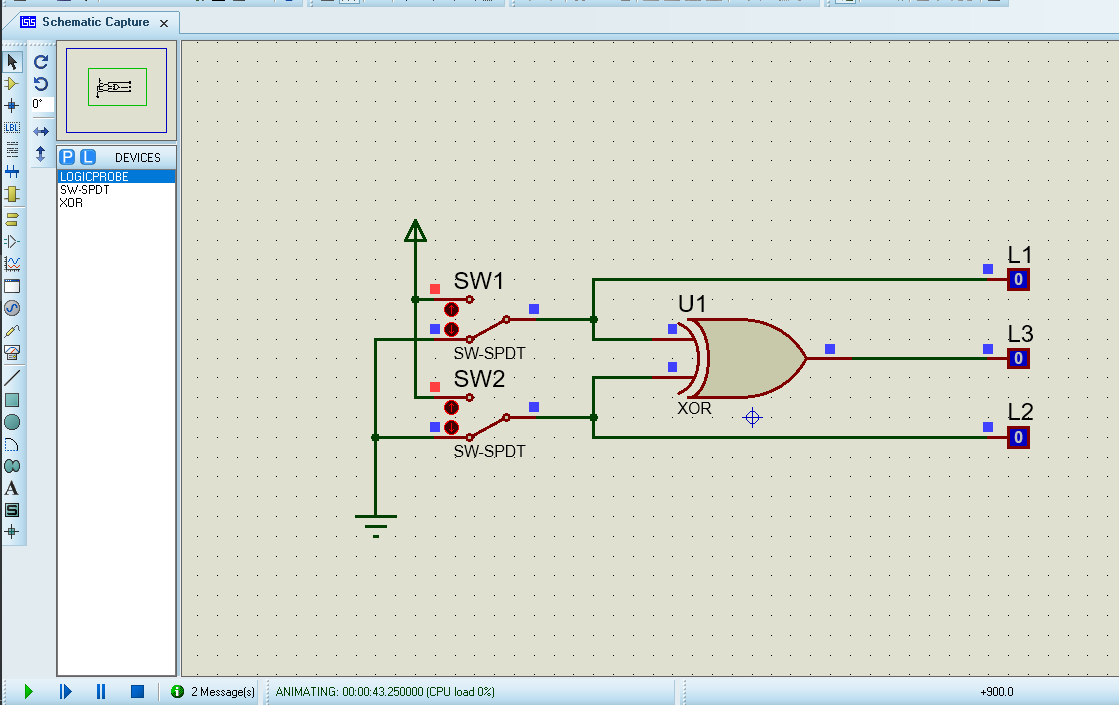
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 |

3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L3 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |

Exercise 6

1. Make Logic Gates on this Picture.



2. Truth Table.

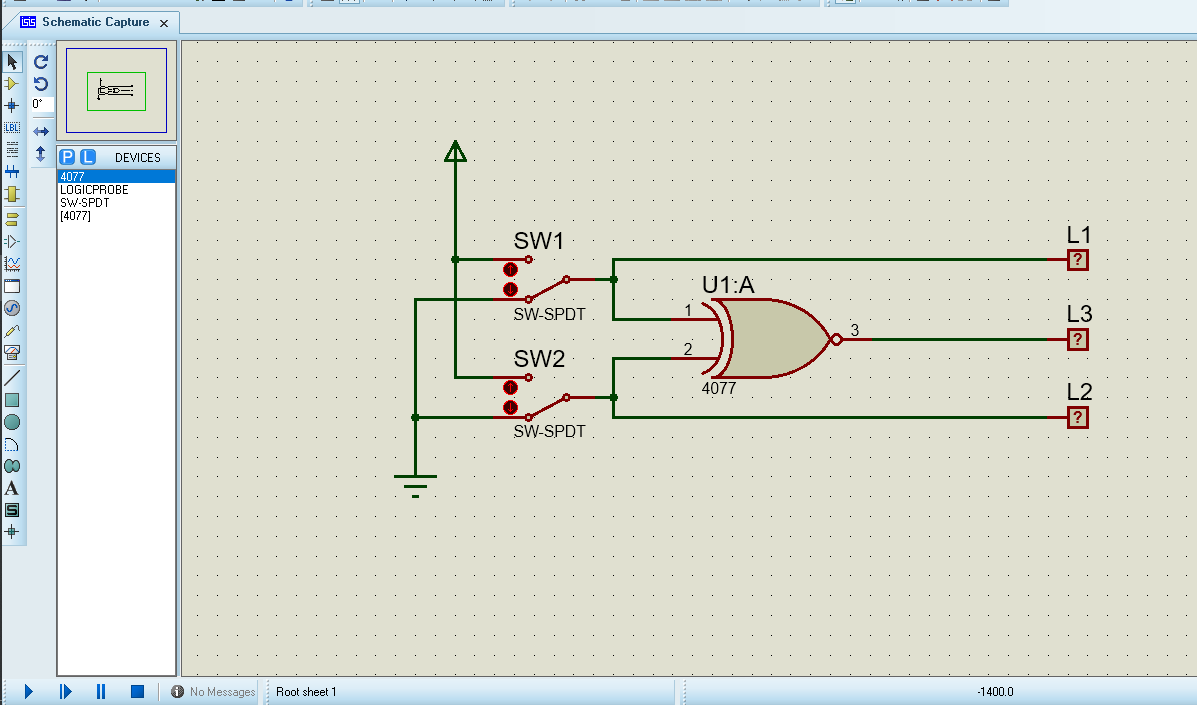
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 |

3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L3 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |

Exercise 7

1. Make Logic Gates on this Picture.



2. Truth Table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S W  1 | SW  2 | L1 | L2 | L3 |
| 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 |

3. Diagram Time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| L1 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L2 |  |  |  |  |
|  |  |
|  |  |  |  |
|  |  |
| L3 |  |  |  |  |
|  |  |
|  |
|  |  |  |  |
|  |