1,2,3 : 4-bits Is All You Need!

Building a Computer Without Newegg - Mike Moss & Erik Talvi
Inception

- Mike - Lawlor challenge
- Erik - Never had milled or soldered circuits
Logisim
Conversion
<table>
<thead>
<tr>
<th>Name</th>
<th>Part</th>
<th>Pins</th>
<th>Per Chip/Qty</th>
<th>Need</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tristate Buffer</td>
<td>74126</td>
<td>14</td>
<td>4</td>
<td>64</td>
<td>16</td>
</tr>
<tr>
<td>Inverter</td>
<td>7404</td>
<td>14</td>
<td>6</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>3-bit Decoder</td>
<td>74238</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2-bit Decoder (NL)</td>
<td>74139</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4-bit Register</td>
<td>74173</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>14-pin Socket</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>16-pin Socket</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>
Bread Board Testing
PCB Layout
Circuit Board Milling
Circuit Board Milling - Set Up
Circuit Board Milling - Software
Circuit Board Milling - Drilling

Need to Consider Video Format. Can use youtube video or alt-tab to video.
Circuit Board Milling - Milling
Circuit Board Milling - Cutting Out

Have a video to upload
Circuit Board Milling - Cleanup
Circuit Board Milling - Errors
Soldering

Placeholder for a posed soldering picture
& Computer

TA - DA

show off our computer: working or failure