

```

<a name="home">
</a>
<br />
<div style="text-align: center;">
<a href="https://raisha212033.blogspot.com/2024/03/modul-1-pratikum-up-uc.html">[KEMBALI
KE MENU SEBELUMNYA]</a></div>
<br />
<center>
<div style="background-color: white; border: 2px dashed rgb(23, 128, 221); height: 240px;
overflow: auto; padding: 10px; text-align: center; width: 330px;">
<b>DAFTAR ISI</b>
<br />
<div style="text-align: left;">
<a href="#Prosedur">1. Prosedur</a></div>
<div style="text-align: left;">
<a href="#Hardware">2. Hardware dan Diagram Blok</a></div>
<div style="text-align: left;">
<a href="#Rangkaian">3. Rangkaian Simulasi dan Prinsip Kerja</a></div>
<div style="text-align: left;">
<a href="#Flowchart">4. Flowchart dan Listing Program</a></div>
<div style="text-align: left;">
<a href="#Demo">5. Kondisi</a></div>
<div style="text-align: left;">
<a href="#Kondisi">6. Video Demo</a></div>
<div style="text-align: left;">
<a href="#Download">7. Download File</a><br />
</div>
</div>
</center>
<span style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;"><span
style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif; font-size:
small;"><b><div><span style="font-family: &quot;times&quot; , &quot;times new roman&quot; ,
serif;"><span style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;
font-size: small;"><b><br /></b></span></span></div><div style="text-align:
center;">PERCOBAAN 1</div><div style="text-align: center;">KOMUNIKASI UART
MENGUNAKAN ARDUINO</div><div><span style="font-family: &quot;times&quot; ,
&quot;times new roman&quot; , serif;"><span style="font-family: &quot;times&quot; ,
&quot;times new roman&quot; , serif; font-size: small;"><b><br /></b></span></span></div>1.
Prosedur </b>
<a name="Prosedur"></a>
<a href="#home">[Kembali]</a></span></span><div><span style="font-family: times, times new
roman, serif;"><br /></span><div><div><div><span style="background-color: white;"><span
style="font-family: inherit;">&nbsp;&nbsp;&nbsp;1.&nbsp;&nbsp;&nbsp;Rangkai komponen sesuai percobaan dan kondisi
yang dipilih.</span></span></div><p class="MsoNormal"><span style="background-color:

```

white;"><o:p></o:p></p><p class="MsoNormal">2. Buat program menggunakan Arduino IDE.<o:p></o:p></p><p class="MsoNormal">3. Compile program yang telah dibuat lalu Upload ke dalam Arduino Uno.<o:p></o:p></p><p class="MsoNormal">4. Uji coba program pada rangkaian percobaan sesuai dengan kondisi yang diinginkan.<o:p></o:p></p><p class="MsoNormal">5. Selesai</p></div><div>

2. Hardware dan Diagram Blok

[Kembali]</div><div><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both; text-align: left;">Hardware:</div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: left;"><div class="separator" style="clear: both; text-align: center;">
</div></div></div><div class="separator" style="clear: both; text-align: center;">
</div>Blok Diagram :
<div>
</div><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; text-align: center;"></div>
<div class="separator" style="clear: both; text-align: center;">
</div></div></div><div>

QhYVK_14ywH25fu6u2f0zfVjHDY_imHpZW0-PYsJIOqEb0ORpJ7Z7go4pnq0KYBgVNeNEKW36oRwFmiZEXLjOWL2en_U/s680/Screenshot%202024-04-29%20133450.png"

style="margin-left: 1em; margin-right: 1em;"></div></div><div><div class="separator" style="clear: both; text-align: center;">
</div></div><div class="separator" style="clear: both; text-align: center;">
</div><div>Listing Program :</div><div>
</div><div><div>Master</div></div><div><div>// MASTER</div><div>#define DS1

2</div><div>#define DS2 3</div><div>#define DS3 4</div><div>#define DS4

5</div><div>#define DS5 6</div><div>#define DS6 7</div><div>#define DS7

8</div><div>#define DS8 9</div><div>
</div><div>void

setup()</div><div>{</div><div> Serial.begin(9600);</div><div> pinMode(DS1,

INPUT_PULLUP);</div><div> pinMode(DS2, INPUT_PULLUP);</div><div> pinMode(DS3, INPUT_PULLUP);</div><div> pinMode(DS4,

INPUT_PULLUP);</div><div> pinMode(DS5, INPUT_PULLUP);</div><div> pinMode(DS6, INPUT_PULLUP);</div><div> pinMode(DS7,

INPUT_PULLUP);</div><div> pinMode(DS8,

INPUT_PULLUP);</div><div>}</div><div>
</div><div>void

loop()</div><div>{</div><div> bool b8 = digitalRead(DS8);</div><div> bool b7 =

digitalRead(DS7);</div><div> bool b6 = digitalRead(DS6);</div><div> bool b5 =

digitalRead(DS5);</div><div> bool b4 = digitalRead(DS4);</div><div> bool b3 =

digitalRead(DS3);</div><div> bool b2 = digitalRead(DS2);</div><div> bool b1 =

digitalRead(DS1);</div><div>
</div><div> // Hidupkan LED sesuai dengan tombol

yang ditekan</div><div> if (b8 == LOW)</div><div> {</div><div> Serial.write('8');</div><div> }</div><div> else if (b7 == LOW)</div><div> {</div><div> Serial.write('7');</div><div> }</div><div> else if (b6 ==

LOW)</div><div> {</div><div> Serial.write('6');</div><div> }</div><div> else if (b5 == LOW)</div><div> {</div><div> Serial.write('5');</div><div> }</div><div> else if (b4 == LOW)</div><div> {</div><div> Serial.write('4');</div><div> }</div><div> else if (b3 ==

LOW)</div><div> {</div><div> Serial.write('3');</div><div> }</div><div> else if (b2 == LOW)</div><div> {</div><div> Serial.write('2');</div><div> }</div><div> else if (b1 == LOW)</div><div> {</div><div> Serial.write('1');</div><div> }</div><div> delay(20);</div><div>}</div><div>
</div><div>Slave</div><div><div>//

SLAVE</div><div>int led[] = {2, 3, 4, 5, 6, 7, 8, 9};</div><div>char message;</div><div>
</div><div>void setup()</div><div>{</div><div> Serial.begin(9600);</div><div> for (int i = 0; i < 8; i++)</div><div> {</div><div> pinMode(led[i],

OUTPUT);</div><div> }</div><div></div><div>
</div><div>void

loop()</div><div>{</div><div> if (Serial.available())</div><div> {

char inChar = Serial.read();</div><div> if (inChar == '1')</div><div> {

digitalWrite(led[0], HIGH);</div><div> }</div><div> else if (inChar == '2')</div><div> {

digitalWrite(led[1], HIGH);</div><div> }</div><div> else if (inChar == '3')</div><div> {

digitalWrite(led[2], HIGH);</div><div> }</div><div> else if (inChar == '4')</div><div> {

digitalWrite(led[3], HIGH);</div><div> }</div><div> else if (inChar == '5')</div><div> {

digitalWrite(led[4], HIGH);</div><div> }</div><div> else if (inChar == '6')</div><div> {

digitalWrite(led[5], HIGH);</div><div> }</div><div> else if (inChar == '7')</div><div> {

digitalWrite(led[6], HIGH);</div><div> }</div><div> else if (inChar == '8')</div><div> {

digitalWrite(led[7], HIGH);</div><div> }</div><div> }</div><div> }</div><div> }

</div><div> }</div><div> }

</div><div> }

</div><div> }

</div><div> }

</div><div> }

</div><div> }

</div><div> }

</div><div> }

</div><div> }

```

{</div><div>&nbsp; &nbsp; message = Serial.read();</div><div>&nbsp; &nbsp; if (message ==
'1')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[0],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'2')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[1],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'3')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[2],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'4')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[3],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'5')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[4],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'6')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[5],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'7')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[6],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; else if (message ==
'8')</div><div>&nbsp; &nbsp; {</div><div>&nbsp; &nbsp; &nbsp; digitalWrite(led[7],
1);</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; delay(20); // moved delay inside the if
block</div><div>&nbsp; &nbsp; digitalWrite(led[0], 0);</div><div>&nbsp; &nbsp;
digitalWrite(led[1], 0);</div><div>&nbsp; &nbsp; digitalWrite(led[2], 0);</div><div>&nbsp; &nbsp;
digitalWrite(led[3], 0);</div><div>&nbsp; &nbsp; digitalWrite(led[4], 0);</div><div>&nbsp; &nbsp;
digitalWrite(led[5], 0);</div><div>&nbsp; &nbsp; digitalWrite(led[6], 0);</div><div>&nbsp; &nbsp;
digitalWrite(led[7], 0);</div><div>&nbsp; &nbsp; }</div><div></div><div><br /></div><div>
<span style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;"><span
style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif; font-size:
small;"><b>5. Kondisi&nbsp;</b><a name="Demo"></a><a
href="#home">[Kembali]</a></span></span></div><div><span style="font-family:
&quot;times&quot; , &quot;times new roman&quot; , serif;"><br /></span></div><div><span
style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;">Percobaan 1
pada Modul 3</span></div><div><span style="font-family: times, times new roman, serif;"><br
/></span>
<span style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;"><span
style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif; font-size:
small;"><b>6. Video Demo&nbsp;</b><a name="Kondisi"></a><a
href="#home">[Kembali]</a></span></span><span style="font-family: &quot;times&quot; ,
&quot;times new roman&quot; , serif;"><span style="font-family: &quot;times&quot; ,
&quot;times new roman&quot; , serif; font-size: small;"><a
href="#home">]</a></span></span></div><div><span style="font-family: &quot;times&quot; ,
&quot;times new roman&quot; , serif;"><br /></span></div><div><span style="font-family:
&quot;times&quot; , &quot;times new roman&quot; , serif;"><br /></span></div><div><div
class="separator" style="clear: both; text-align: center;"><iframe allowfullscreen=""
class="BLOG_video_class" height="266" src="https://www.youtube.com/embed/W_5HDfwa-Tc"
width="320" youtube-src-id="W_5HDfwa-Tc"></iframe></div></div><div><span
style="font-family: times, times new roman, serif;"><br /></span><span style="font-family:
&quot;times&quot; , &quot;times new roman&quot; , serif;"><span style="font-family:

```

