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<a name="home">

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<div style="text-align: center;">

<a href="#">[KEMBALI KE MENU SEBELUMNYA]</a></div>

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<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>

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<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="#video">5. Video Demo</a></div>

<div style="text-align: left;">

<a href="#kondisi">6. Kondisi</a></div>

<div style="text-align: left;">

<a href="#download">7. Download</a><br />

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<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><br /></div>1. Prosedur</b>&nbsp;<a name="jurnal"></a><a
href="#home">[Kembali]</a></span></span><div><span style="font-family: times, times new
roman, serif;"><br /></span><div><span style="background-color: white; box-sizing: border-box;

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color: #212529; font-family: times; font-size: 16px;">I. Buatlah rangkaian dengan alat dan bahan yang ada sesuai dengan modul.

II. Buatlah program untuk arduino master dan slave di software Arduino IDE.

III. Compile program tadi, lalu upload ke dalam arduino.

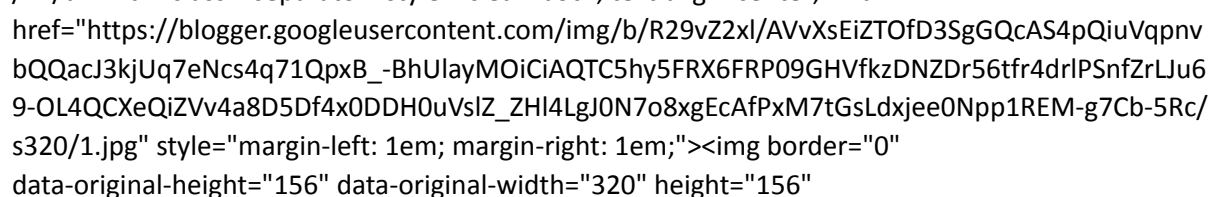
IV. Setelah program selesai di upload, jalankan rangkaian.

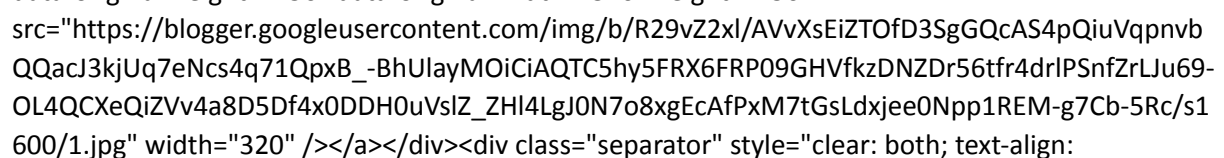
font-family: "times" , "times new roman" , serif; font-size: small;

2. Hardware dan Diagram Blok

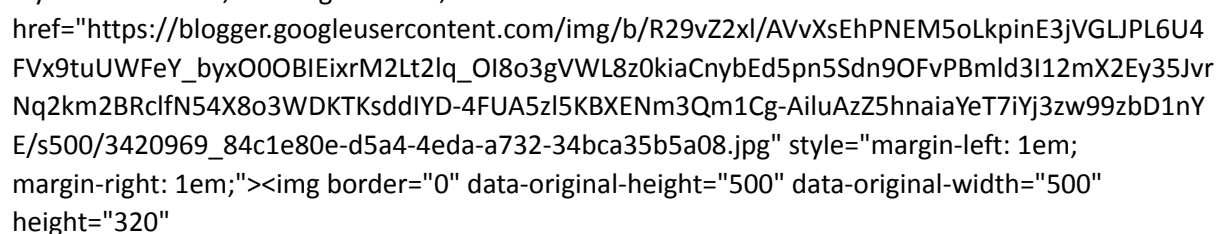
[\[Kembali\]](#)

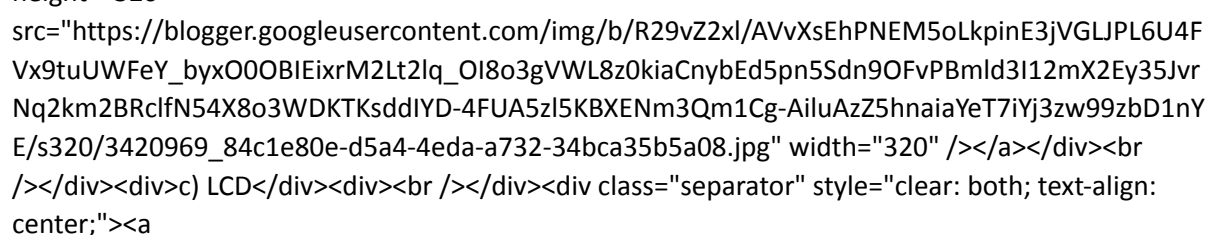
a) Modul Arduino

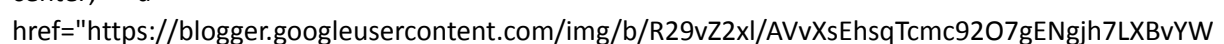




b) Keypad







[illegible]

text-align: justify;">>Rangkaian komunikasi dalam gambar tersebut menggunakan protokol UART (Universal Asynchronous Receiver Transmitter) untuk menghubungkan dua papan Arduino. Protokol UART memungkinkan komunikasi serial asinkron antara dua perangkat, di mana data ditransmisikan satu bit pada satu waktu tanpa memerlukan sinyal jam eksternal. Ketika tombol pada keypad ditekan, pin keypad yang sesuai akan terhubung ke ground (0).Arduino UNO master membaca status pin keypad secara berkala. Ketika pin keypad terdeteksi rendah (0), Arduino UNO master akan mengidentifikasi tombol yang ditekan.</div><div class="separator" style="clear: both; text-align: justify;">
</div><div class="separator" style="clear: both; text-align: justify;">Arduino UNOmastermengirimkan data yang diidentifikasi dari keypad ke Arduino UNO slave melalui protokol UART. Data ini dapat berupa kode ASCII untuk tombol yang ditekan atau nilai numerik.Arduino UNOslave menerima data UART dari Arduino UNO (ARD1) dan mendekodkannya menjadi informasi yang dapat dimengerti.Arduino UNOslavemenampilkan data yang diterima pada LCD.</div><div class="separator" style="clear: both; text-align: left;">
</div>

4.Flowchart dan Listing Program[Kembali</div><div>
</div><div style="text-align: justify;"><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; font-family: times; text-align: center;"></div><div class="separator" style="clear: both; font-family: times; text-align: center;">Flowchart Master Arduino</div><div class="separator" style="clear: both; font-family: times; text-align: center;">
</div><div class="separator" style="clear: both; font-family: times; text-align: center;">

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src="https://bloggger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEgavfAyo0C5Q3yXhF9vi67mph5
3v19Z_uWqZ1sYchWv4li7saouvrK97yvKgMI5flnbLAP6Rj3AOFJraRKJwNR7iUvyqITVL1xUyLD6pBv_Ek0
pWGbCOCfPitp9BLuai0kZWYxfrkc1J-UJ37FjmdMRarMFhZMQmUdUgZSNllwybnqaw0PJh0TwubniB3bVj
/s320/Screenshot%20(96).png" width="298" /></a></div><div class="separator" style="clear: both;
font-family: times; text-align: center;">Flowchart Slave Arduino</div><br /><div class="separator"
style="clear: both; font-family: times; text-align: center;"><br /></div><div class="separator"
style="clear: both; font-family: times; text-align: left;">Listing Program</div><div class="separator"
style="clear: both; font-family: times; text-align: left;">Master</div><div class="separator"
style="clear: both; font-family: times; text-align: left;"><br /></div><div class="separator"
style="clear: both; text-align: left;"><div style="background-color: white;"><div><div style="color:
#4e5b61; font-family: Consolas, "Courier New";, monospace; font-size: 14px; line-height:
19px; white-space: pre;"><div><span style="color: #728e00;">#include</span> <span style="color:
#005c5f;">&lt;Key.h&gt;</span></div><div><span style="color: #728e00;">#include</span> <span
style="color: #005c5f;">&lt;Keypad.h&gt;</span></div><br /><div><span style="color: #95a5a6;">//
MASTER</span></div><div><span style="color: #728e00;">#include</span> <span style="color:
#005c5f;">&lt;Keypad.h&gt;</span></div><div><span style="color: #00979d;">const</span> byte
ROWS = <span style="color: #005c5f;">4</span>;</div><div><span style="color:
#00979d;">const</span> byte COLS = <span style="color: #005c5f;">3</span>;</div><div><span
style="color: #95a5a6;">// Array to represent keys on keypad</span></div><div><span style="color:
#00979d;">char</span> <span style="color: #d35400;">hexaKeys</span>[ROWS][COLS] = <span
style="color: #434f54;"><{</span></div><div>&nbsp;<span style="color: #434f54;"><{</span><span>'1', '2',
'3'<span style="color: #434f54;"><}</span></div><div>&nbsp;<span style="color:
#434f54;"><{</span><span>'4', '5', '6'<span style="color: #434f54;"><}</span></div><div>&nbsp;<span
style="color: #434f54;"><{</span><span>'7', '8', '9'<span style="color:
#434f54;"><}</span></div><div>&nbsp;<span style="color: #434f54;"><{</span><span>'*', '0', '#'<span
style="color: #434f54;"><}</span></div><div><span style="color:
#434f54;"><}</span></div><div>byte <span style="color: #d35400;">rowPins</span>[ROWS] = <span
style="color: #434f54;"><{</span><span style="color: #005c5f;">7</span>,<span style="color:
#005c5f;">6</span>,<span style="color: #005c5f;">5</span>,<span style="color:
#005c5f;">4</span><span style="color: #434f54;"><}</span></div><div>byte <span style="color:
#d35400;">colPins</span>[COLS] = <span style="color: #434f54;"><{</span><span style="color:
#005c5f;">8</span>,<span style="color: #005c5f;">9</span> ,<span style="color:
#005c5f;">10</span><span style="color: #434f54;"><}</span></div><div><span style="color:
#95a5a6;">// Create keypad object</span></div><div>Keypad customKeypad = <span style="color:
#d35400;">Keypad</span><span style="color: #434f54;"><{</span><span style="color:
#d35400;">makeKeymap</span><span style="color: #434f54;"><{</span>hexaKeys<span style="color:
#434f54;"><}</span>,<span style="color: #434f54;">rowPins,<span style="color:
#434f54;"><}</span></div><div><span style="color: #00979d;">void</span> <span style="color:
#d35400;">setup</span><span style="color: #434f54;"><{</span><span></div><div><span style="color:
#434f54;"><{</span></div><div><span style="color: #d35400;">Serial</span>.<span style="color:
#d35400;">begin</span><span style="color: #434f54;"><{</span><span style="color:
#005c5f;">9600</span><span style="color: #434f54;"><}</span></div><div><span style="color:
#434f54;"><}</span></div><div><span style="color: #00979d;">void</span> <span style="color:
#d35400;">loop</span><span style="color: #434f54;"><{</span><span></div><div><span style="color:
#434f54;"><{</span></div><div>&nbsp;<span style="color: #00979d;">char</span> customKey =
<span style="color: #d35400;">customKeypad</span>.<span style="color:
#d35400;">getKey</span><span style="color: #434f54;"><{</span></div><div>&nbsp;<span
style="color: #728e00;">if</span> <span style="color: #434f54;"><{</span><span>customKey<span

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style="color: #434f54;"}</div><div> <span style="color: #434f54;"}</div><div> Serial.write<span style="color: #434f54;"}customKey<span style="color: #434f54;"}</div><div> <span style="color: #434f54;"}</div><div> delay<span style="color: #434f54;"}20<span style="color: #434f54;"}</div><div><span style="color: #434f54;"}</div>
</div><div style="color: #757575; font-family: inherit; font-size: 15px;">
</div><div style="color: #757575; font-family: inherit; font-size: 15px;">Slave</div><div style="color: #757575; font-family: inherit; font-size: 15px;">
</div><div style="color: #757575; font-family: inherit; font-size: 15px;"><div style="color: #4e5b61; font-family: Consolas, "Courier New"; monospace; font-size: 14px; line-height: 19px; white-space: pre;"><div>#include <LedControl.h></div>
<div>>//SLAVE</div><div>#include <LiquidCrystal.h></div><div>LiquidCrystal lcd<span style="color: #434f54;"}A0, A1, A2, A3, A4, A5<span style="color: #434f54;"}</div><div>char message;</div><div>void setup<span style="color: #434f54;"}()</div><div><span style="color: #434f54;"}</div><div> Serial.begin<span style="color: #434f54;"}9600<span style="color: #434f54;"}</div><div> lcd.begin<span style="color: #434f54;"}16, 2<span style="color: #434f54;"}</div><div><span style="color: #434f54;"}</div><div>void loop<span style="color: #434f54;"}()</div><div><span style="color: #434f54;"}</div><div> lcd.setCursor<span style="color: #434f54;"}0, 0<span style="color: #434f54;"}</div><div> lcd.print<span style="color: #434f54;"}"Tombol : "<span style="color: #434f54;"}</div><div> if <span style="color: #434f54;"}Serial.available<span style="color: #434f54;"}<span style="color: #434f54;"}()</div><div><span style="color: #434f54;"}</div><div> Serial.read<span style="color: #434f54;"}()</div><div> if <span style="color: #434f54;"}<span style="color: #434f54;"}message = Serial.read<span style="color: #434f54;"}()</div><div> if <span style="color: #434f54;"}<span style="color: #434f54;"}message<span style="color: #434f54;"}</div><div> <span style="color: #434f54;"}</div><div> lcd.print<span style="color: #434f54;"}message<span style="color: #434f54;"}</div><div> <span style="color: #434f54;"}</div><div><span style="color: #434f54;"}</div>
</div><div style="text-align: justify;"><div style="color: #4e5b61; font-family: Consolas, "Courier New"; monospace; font-size: 14px; margin: 0px;

outline: none; padding: 0px; text-align: start; white-space: pre;">
</div></div></div></div>

5. Video Demo [Kembali]</div><div>
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<div class="separator" style="clear: both; text-align: center;">
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6. Kondisi [Kembali]</div><div>
</div><div>Percobaan 4(tanpa Kondisi)</div><div>
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7. Download

[Kembali]

</div><div>
</div><div>Video Simulasi
</div><div>Datasheet LCD
</div><div>Datasheet Arduino Uno
</div><div>Datasheet Keypad
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