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<a href="https://raisha212033.blogspot.com/2024/04/modul-3.html">[KEMBALI KE MENU
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<b>DAFTAR ISI</b>
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<a href="#Prosedur">1. Prosedur</a></div>
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<a href="#hardware">2. Hardware dan Diagram Blok</a></div>
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<a href="#rangkaian">3. Rangkaian Simulasi dan Prinsip Kerja</a></div>
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<a href="#flowchart">4. Flowchart dan Listing Program</a></div>
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<a href="#Kondisi">5. Kondisi</a></div>
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<a href="#Video">6. Video Simulasi</a></div>
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<a href="#download">7. Download File</a></div>
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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;
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font-size: small;"><b><br /></b></span></span></div><div style="text-align: center;">Tugas
Pendahuluan Modul 3</div><div style="text-align: center;">Percobaan 3 Kondisi 5</div>1.
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Prosedur</b>
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<a name="Prosedur"></a>
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<a href="#home">[Kembali]</a></span></span><div><span style="font-family: times, times new
roman, serif;">1. Rangkai komponen sesuai percobaan dan kondisi yang
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dipilih.</span></div><div><span style="font-family: times, times new roman, serif;">2. Buat
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program menggunakan Arduino IDE.</span></div><div><span style="font-family: times, times
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new roman, serif;">3. Transfer program yang telah dibuat ke Arduino yang ada di
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Proteus.</span></div><div><span style="font-family: times, times new roman, serif;">4. Uji
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coba program di simulasi sesuai dengan kondisi yang diinginkan.</span></div><div><span
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style="font-family: times, times new roman, serif;">5. Proses selesai setelah uji coba berhasil
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dilakukan.

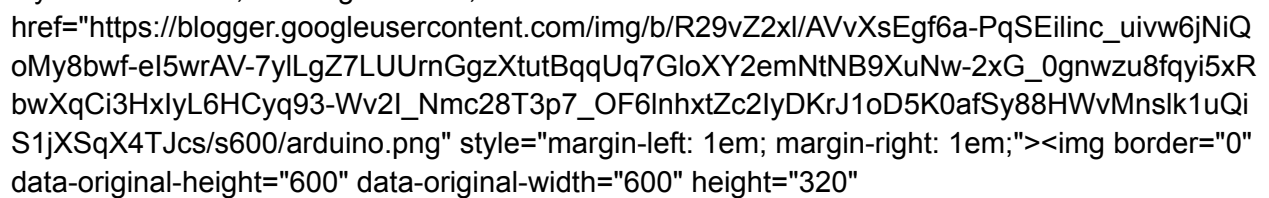
**2. Hardware dan Diagram Blok**

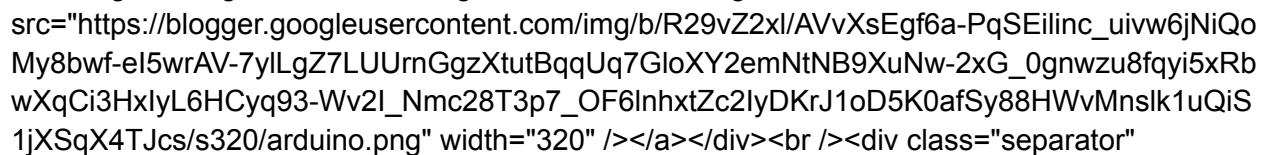
[hardware](#)

[\[Kembali\]](#)

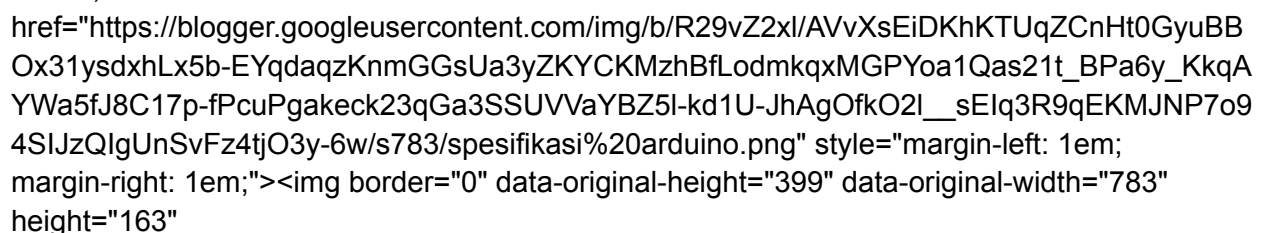
**1.**

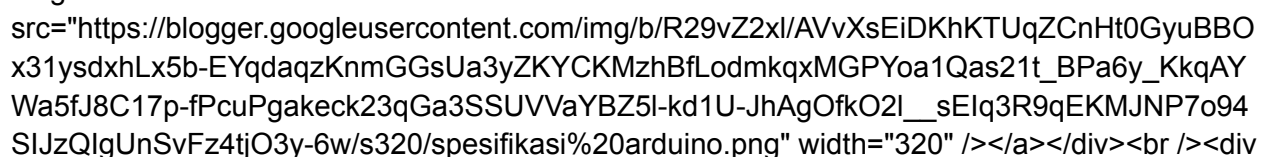
**Modul Arduino Uno**

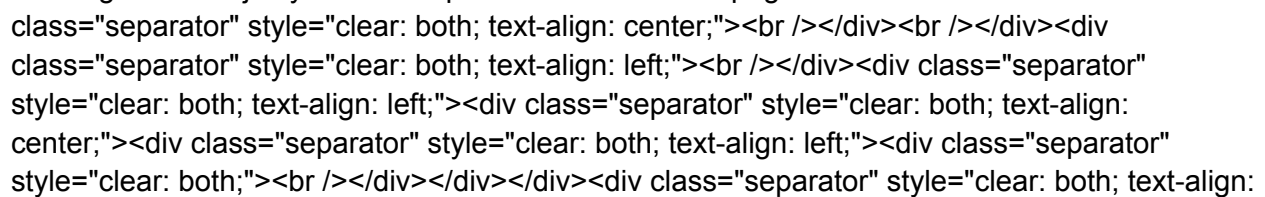




spesifikasi:

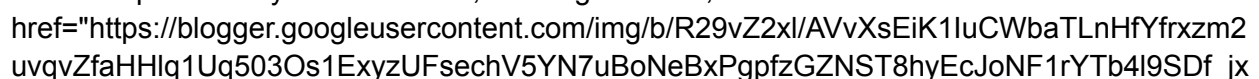






**3. Keypad**

[hardware](#)





**B. Prinsip Kerja**

MASTER

Arduino master berfungsi untuk membaca input yang diberikan oleh keypad kemudian menerjemahkan input tersebut menjadi sebuah pesan sesuai dengan kondisi yang diberikan. berdasarkan kondisi, key A- D menampilkan huruf A- D secara berturut- turut. ketika key 1, 2, dan 3, ditekan, maka inputan tersebut akan diterjemahkan menjadi pesan "A". Jika key 4, 5, 6 ditekan, maka inputan tersebut akan dituliskan sebagai pesan "B". Ketika tombol yang ditekan adalah 7, 8, 9 maka inputan tersebut akan diterjemahkan menjadi pesan "C" sedangkan ketika input yang diberikan selain yang dituliskan sebelumnya, maka diterjemahkan menjadi pesan "D". Kemudian pesan tersebut akan dikirimkan oleh arduino master ke arduino slave melalui komunikasi I2C.

SLAVE

Arduino slave berfungsi untuk menerima pesan yang dikirimkan oleh arduino master. Arduino slave dihubungkan dengan LCD sebagai output untuk menampilkan instruksi yang dibawa oleh pesan. Berdasarkan kondisi, huruf akan ditampilkan akan mengalami blinking pada kolom pertama. Ketika pesan yang diterima adalah A, maka LCD akan menampilkan huruf "A", ketika pesan yang diterima adalah B, maka LCD akan menampilkan huruf "B", ketika pesan yang diterima adalah C, maka LCD akan menampilkan huruf "C", sedangkan ketika pesan yang diterima adalah D, maka LCD akan menampilkan huruf "D". Pesan tersebut diterima oleh arduino slave melalui komunikasi I2C.

4. Flowchart dan Listing Program

[\[Kembali\]](#)



[https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEi6H6pkTQ5zzz1urNHLoui1QIHpCWEX8t3-DIntm\\_BagANx69zQZuSvOHNXi\\_PqDg8qSVTfRUq0V37k4I0T5jQZhzPq5v7h9d9L3Y1V9wXSuTWeBTqYkXdAJadK70Pbr3EzNyZLgnDXU64AGk136wxrg\\_4R4Er\\_NsxoSkanY1A229zST7rf6dO5qd5Al/s484/Screenshot%202024-04-29%20141629.png](https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEi6H6pkTQ5zzz1urNHLoui1QIHpCWEX8t3-DIntm_BagANx69zQZuSvOHNXi_PqDg8qSVTfRUq0V37k4I0T5jQZhzPq5v7h9d9L3Y1V9wXSuTWeBTqYkXdAJadK70Pbr3EzNyZLgnDXU64AGk136wxrg_4R4Er_NsxoSkanY1A229zST7rf6dO5qd5Al/s484/Screenshot%202024-04-29%20141629.png)

nY1A229zST7rf6dO5qd5Al/s320/Screenshot%202024-04-29%20141629.png" width="282" /></a></div><div class="separator" style="clear: both; text-align: center;"><br /></div><div class="separator" style="clear: both; text-align: left;">Slave</div><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEhpJbLLF9wJ7f1gWshi5IBB06fb8J5fPqvwwulZjG8dpy7mavulQUsKvaHh6P5Z-YDslJ4RSuPyeZFmKIMI73KEYD5\_rVvs\_Yco7Syb3dWPyQERJXJdl\_LkoysDjt\_h5LqXzm06HdO-etVmswDqjCV41DSCdEye3VgC68f8NjrZZw5cnRdvNRFuha9tQs0M/s461/Screenshot%202024-04-29%20141705.png" style="margin-left: 1em; margin-right: 1em;"></a></div><div class="separator" style="clear: both; text-align: center;"><br /></div></div><div /><span style="font-family: &quot;times&quot; , &quot;times new roman&quot; , serif;"><b>b. Listing Program</b></span></div><div><b><br /></b></div><div><b>Master:</b></div><div><div><br /></div></div><div><div>#include &lt;Keypad.h&gt;</div><div>#include &lt;Wire.h&gt;</div><div><br /></div><div>const byte ROWS = 4;</div><div>const byte COLS = 3;</div><div>char keys[ROWS][COLS] = </div><div>&nbsp; { '1', '2', '3'},</div><div>&nbsp; { '4', '5', '6'},</div><div>&nbsp; { '7', '8', '9'},</div><div>&nbsp; { '\*', '0', '#'},</div><div>};</div><div>char rowPins[ROWS] = {9, 8, 7, 6};</div><div>char colPins[COLS] = {5, 4, 3};</div><div>Keypad keypad = Keypad(makeKeymap(keys), rowPins, colPins, ROWS, COLS);</div><div><br /></div><div>void setup() {</div><div>&nbsp; Wire.begin(); // join i2c bus (address optional for master)</div><div>}</div><div><br /></div><div>void loop() {</div><div>&nbsp; char key = keypad.getKey();</div><div>&nbsp; if (key) {</div><div>&nbsp; &nbsp; char letter;</div><div>&nbsp; &nbsp; if (key == '1' || key == '2' || key == '3') {</div><div>&nbsp; &nbsp; &nbsp; &nbsp; letter = 'A';</div><div>&nbsp; &nbsp; } else if (key == '4' || key == '5' || key == '6') {</div><div>&nbsp; &nbsp; &nbsp; &nbsp; letter = 'B';</div><div>&nbsp; &nbsp; } else if (key == '7' || key == '8' || key == '9') {</div><div>&nbsp; &nbsp; &nbsp; &nbsp; letter = 'C';</div><div>&nbsp; &nbsp; } else {</div><div>&nbsp; &nbsp; &nbsp; &nbsp; letter = 'D';</div><div>&nbsp; &nbsp; }</div><div>&nbsp; &nbsp; Wire.beginTransmission(4); // transmit to device #4</div><div>&nbsp; &nbsp; Wire.write(letter);</div><div>&nbsp; &nbsp; Wire.endTransmission(); // stop transmitting</div><div>&nbsp; &nbsp; delay(100); // Added delay for stability</div><div>&nbsp; }</div><div>}</div></div><div><br /></div><div><b>Slave:</b></div><div><br /></div><div><div>#include &lt;LiquidCrystal.h&gt;</div><div>#include &lt;Wire.h&gt;</div><div><br /></div><div>LiquidCrystal lcd(12, 11, 5, 4, 3, 2); // Sesuaikan pin sesuai dengan koneksi LCD</div><div>char receivedLetter;</div><div>bool letterReceived = false;</div><div><br /></div><div>void setup() {</div><div>&nbsp; lcd.begin(16, 2);</div><div>&nbsp; Wire.begin(4); // join i2c bus with address #4</div><div>&nbsp; Wire.onReceive(receiveEvent); // register event</div><div>&nbsp; Serial.begin(9600); // start serial for output</div><div>}</div><div><br /></div><div>void loop() {</div><div>&nbsp; if (letterReceived) {</div><div>&nbsp; &nbsp; for





class="post-comment-link" style="margin-right: 1em;"/><span class="post-icons" style="margin-right: 1em;"/><div class="post-share-buttons goog-inline-block" style="display: inline-block; margin-right: 0px; margin-top: 0.5em; position: relative; vertical-align: middle;"/><a class="goog-inline-block share-button sb-email" href="https://www.blogger.com/share-post.g?blogID=4256066757487561723&pageID=7478581703775371998&target=email" style="background-attachment: initial; background-clip: initial; background-color: initial; background-origin: initial; background-position: 0px 0px; background-repeat: no-repeat; background-size: initial; background: url(&quot;/img/share\_buttons\_20\_3.png&quot;) 0px 0px no-repeat !important; color: #2667cf; display: inline-block; height: 20px; margin-left: -1px; overflow: hidden; position: relative; text-decoration-line: none; width: 20px;"/><span class="share-button-link-text" style="display: block; text-indent: -9999px;"/>Kirimkan Ini lewat Email</span></a><a class="goog-inline-block share-button sb-blog" href="https://www.blogger.com/share-post.g?blogID=4256066757487561723&pageID=7478581703775371998&target=blog" style="background-attachment: initial; background-clip: initial; background-color: initial; background-origin: initial; background-position: -20px 0px; background-repeat: no-repeat; background-size: initial; background: url(&quot;/img/share\_buttons\_20\_3.png&quot;) -20px 0px no-repeat !important; color: #2667cf; display: inline-block; height: 20px; margin-left: -1px; overflow: hidden; position: relative; text-decoration-line: none; width: 20px;"/><span class="share-button-link-text" style="display: block; text-indent: -9999px;"/>BlogThis!</span></a><a class="goog-inline-block share-button sb-twitter" href="https://www.blogger.com/share-post.g?blogID=4256066757487561723&pageID=7478581703775371998&target=twitter" style="background-attachment: initial; background-clip: initial; background-color: initial; background-origin: initial; background-position: -40px 0px; background-repeat: no-repeat; background-size: initial; background: url(&quot;/img/share\_buttons\_20\_3.png&quot;) -40px 0px no-repeat !important; color: #2667cf; display: inline-block; height: 20px; margin-left: -1px; overflow: hidden; position: relative; text-decoration-line: none; width: 20px;"/><span class="share-button-link-text" style="display: block; text-indent: -9999px;"/>Berbagi ke Twitter</span></a><a class="goog-inline-block share-button sb-facebook" href="https://www.blogger.com/share-post.g?blogID=4256066757487561723&pageID=7478581703775371998&target=facebook" style="background-attachment: initial; background-clip: initial; background-color: initial; background-origin: initial; background-position: -60px 0px; background-repeat: no-repeat; background-size: initial; background: url(&quot;/img/share\_buttons\_20\_3.png&quot;) -60px 0px no-repeat !important; color: #2667cf; display: inline-block; height: 20px; margin-left: -1px; overflow: hidden; position: relative; text-decoration-line: none; width: 20px;"/><span class="share-button-link-text" style="display: block; text-indent: -9999px;"/>Berbagi ke Facebook</span></a><a class="goog-inline-block share-button sb-pinterest" href="https://www.blogger.com/share-post.g?blogID=4256066757487561723&pageID=7478581703775371998&target=pinterest" style="background-attachment: initial; background-clip: initial; background-color: initial; background-origin: initial; background-position: -100px 0px; background-repeat: no-repeat; background-size: initial; background:



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