

```

<p><span style="font-family: inherit;">&nbsp;</span></p><div style="background-color:
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0px;"><span style="font-family: inherit;"><br style="box-sizing: border-box;"
/></span></div><div style="background-color: white; border: 0px; box-sizing: border-box;
font-size: 15px; margin: 0px; padding: 0px; text-align: center;"><a
href="https://salmanhadi211019.blogspot.com/2024/02/modul-1_29.html" name="atas"
style="border: 0px; box-sizing: border-box; color: black; font-family: inherit; margin: 0px;
padding: 0px; text-decoration-line: none; transition: 0.3s;"><span>[KEMBALI KE MENU
SEBELUMNYA]</span></a></div><div style="background-color: white; border: 0px;
box-sizing: border-box; font-size: 15px; margin: 0px; padding: 0px; text-align: center;"><span
style="font-family: inherit;"><br /></span></div><center style="background-color: white;
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dashed rgb(23, 128, 221); box-sizing: border-box; font-size: 15px; height: 240px; margin:
0px; overflow: auto; padding: 10px; width: 330px;"><span style="font-family: inherit;"><b
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><a name="home"
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; transition:
0.3s;">DAFTAR ISI</a></b><br style="box-sizing: border-box;" /></span><div style="border:
0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#Foto"
id="Foto" style="border: 0px; box-sizing: border-box; color: black; font-family: inherit; margin:
0px; padding: 0px; text-decoration-line: none; transition: 0.3s;"><span>1. Foto Hardware dan
Diagram Blok</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; text-align: left;"><a href="#P" style="border: 0px; box-sizing: border-box; color:
black; font-family: inherit; margin: 0px; padding: 0px; text-decoration-line: none; transition:
0.3s;"><span>2. Prosedur Percobaan</span></a></div><div style="border: 0px; box-sizing:
border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#R" style="border: 0px;
box-sizing: border-box; color: black; font-family: inherit; margin: 0px; padding: 0px;
text-decoration-line: none; transition: 0.3s;"><span>3. Rangkaian Simulasi dan Prinsip
Kerja</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; text-align: left;"><a href="#F" name="" style="border: 0px; box-sizing:
border-box; color: black; font-family: inherit; margin: 0px; padding: 0px; text-decoration-line:
none; transition: 0.3s;"><span>4. Flowchart dan Listing Program</span></a></div><div
style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><a
href="#K" style="border: 0px; box-sizing: border-box; color: black; font-family: inherit; margin:
0px; padding: 0px; text-decoration-line: none; transition: 0.3s;"><span>5.
Kondisi</span></a></div><div style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; text-align: left;"><a href="#V" style="border: 0px; box-sizing: border-box; color:
black; font-family: inherit; margin: 0px; padding: 0px; text-decoration-line: none; transition:
0.3s;"><span>6. Video Simulasi</span></a></div><div style="border: 0px; box-sizing:
border-box; margin: 0px; padding: 0px; text-align: left;"><a href="#L" style="border: 0px;
box-sizing: border-box; color: black; font-family: inherit; margin: 0px; padding: 0px;
text-decoration-line: none; transition: 0.3s;"><span>7. Link Download</span></a></div><div
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left;"></div></div><h1 style="border: 0px; box-sizing: border-box; font-size: 21px;
letter-spacing: 0px; line-height: 30px; margin: 0px 0px 7px; padding-bottom: 0px;
padding-left: 0px; padding-right: 0px; padding-top: 4px !important; padding: 4px 0px 0px;
position: relative; text-indent: -1px;"><b style="border: 0px; box-sizing: border-box;
font-family: inherit; margin: 0px; padding: 0px; text-align: left;"><span style="border: 0px;
box-sizing: border-box; font-size: medium; margin: 0px; padding: 0px;"><span>Percobaan

```

3
Komunikasi I2C Menggunakan Arduino
</h1><h3 style="border: 0px; box-sizing: border-box; font-size: 19px; letter-spacing: 0px; line-height: 29px; margin: 0px 0px 7px; padding-bottom: 0px; padding-left: 0px; padding-right: 0px; padding-top: 4px !important; padding: 4px 0px 0px; position: relative; text-align: justify; text-indent: -1px;"><b style="border: 0px; box-sizing: border-box; font-family: inherit; margin: 0px; padding: 0px; text-align: left;">1. Foto Hardware dan Diagram Blok [Kembali]</h3><div style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><h3>Hardware <br style="box-sizing: border-box;" /></h3><center style="background-color: white; border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; text-align: left;"><div class="separator" style="clear: both; text-align: left;">1. Arduino Uno</div>
<div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both; text-align: left;"> 2. <b style="cursor: url("https://ani.cursors-4u.net/cursors/cur-11/cur1089.cur");, auto !important; font-family: verdana;">Keypad</div>
<div class="separator" style="clear: both; text-align: center;">

src="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEhe7xbXe3VJrarvEu7_OZn60LHuK6GfXUwWaf-QIm4NdrLD95UkX_IC2IYpgo-G7TDMv1jy7CdxRBlvj35hEp-SG6Ws3cCSBccQ-uB0loF0hD_gv6YuY_8zxEfaeBEH9Is6zU-sKJxI9zZCUagB6cYpbHk9rmnn3FKYSgDGday7Z1jbFlo9qpdGpEw6nl/s320/WhatsApp%20Image%202024-04-04%20at%2016.41.56_431cf229.jpg" width="237" /></div>
<div class="separator" style="clear: both; text-align: center;">
</div>
<center style="background-color: white; border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><div class="separator" style="clear: both; text-align: left;"><b style="font-family: verdana;"> 3.<b style="cursor: url("https://ani.cursors-4u.net/cursors/cur-11/cur1089.cur"), auto !important; font-family: verdana;">LCD</div></div></center><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px; text-align: left;">
</blockquote></blockquote></blockquote></blockquote><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><blockquote style="border: none; margin: 0px 0px 0px 40px; padding: 0px;"><center style="background-color: white; border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><div class="separator" style="clear: both; text-align: left;"></div></div></center></blockquote></blockquote></blockquote><center style="background-color: white; border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;">Diagram Blok:</div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><br style="box-sizing: border-box;" /><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEisZlBQNzq6t4oM9z_Ln

[illegible]

font-size: 15px; margin: 0px; padding: 0px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;">
</div><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;">3. Rangkaian Simulasi dan Prinsip Kerja [Kembali]</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">
<div style="border: 0px; box-sizing: border-box; font-size: 15px; font-weight: bold; margin: 0px; padding: 0px; text-align: justify;">Rangkaian Simulasi</div><div style="border: 0px; box-sizing: border-box; font-size: 15px; font-weight: bold; margin: 0px; padding: 0px; text-align: justify;"> </div><div style="text-align: center;"><div style="text-align: center;"><div style="border: 0px; box-sizing: border-box; font-size: 15px; font-weight: bold; margin: 0px; padding: 0px; text-align: justify;"></div></div>
</div><div style="border: 0px; box-sizing: border-box; font-size: 15px; font-weight: bold; margin: 0px; padding: 0px; text-align: justify;">Prinsip Kerja</div><div style="border: 0px; box-sizing: border-box; font-size: 15px; font-weight: bold; margin: 0px; padding: 0px; text-align: justify;">
</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: justify;">Dalam susunan ini, terdapat dua Arduino yang saling berkomunikasi, yaitu master dan slave. Peran utama Arduino master adalah mengirimkan pesan yang dimasukkan melalui keypad, sementara Arduino slave bertugas menerima pesan tersebut dan menampilkannya pada layar LCD. Komunikasi antara keduanya menggunakan teknologi I2C, memungkinkan pertukaran data digital. Arduino master menginisialisasi komunikasi I2C dengan memanggil fungsi 'Wire.begin()', menandakan perannya sebagai pengendali utama. Di sisi lain, Arduino slave juga menginisialisasi komunikasi I2C, namun dengan peran sebagai penerima dengan alamat I2C tertentu. Ketika Arduino slave menerima data melalui jalur I2C dari master, fungsi 'receiveEvent' secara otomatis dipanggil, mengizinkan Arduino slave untuk membaca karakter yang diterima dan menampilkannya pada layar LCD. Dengan cara ini, data dapat diantar dari Arduino master ke slave melalui jalur I2C, memungkinkan tampilan pesan yang sesuai pada layar LCD oleh Arduino slave.</div></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><h3 style="border: 0px; box-sizing: border-box; font-size: 19px; letter-spacing: 0px; line-height: 29px; margin: 0px 0px 7px; padding-bottom: 0px; padding-left: 0px; padding-right: 0px; padding-top: 4px !important; padding: 4px 0px 0px; position: relative; text-align: justify; text-indent: -1px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><span style="border: 0px; box-sizing: border-box;

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font-size: medium; margin: 0px; padding: 0px;"><span style="border: 0px; box-sizing:
border-box; margin: 0px; padding: 0px;"><a name="F" style="border: 0px; box-sizing:
border-box; margin: 0px; padding: 0px; transition: 0.3s;">4. Flowchart dan Listing
Program</a></span>&nbsp;<a href="#atas" style="border: 0px; box-sizing: border-box;
margin: 0px; padding: 0px; text-decoration-line: none; transition:
0.3s;">[Kembali]</a></span></b></h3><div name="" style="border: 0px; box-sizing:
border-box; font-size: 15px; margin: 0px; padding: 0px;"><b>Flowchart</b></div><div
name="" style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px; padding:
0px;"><b>&nbsp;</b></div><div name="" style="border: 0px; box-sizing: border-box;
font-size: 15px; margin: 0px; padding: 0px;">Master<b> </b><br /></div><div name=""
style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px; padding:
0px;"></div><div name="" style="border: 0px; box-sizing: border-box; font-size: 15px;
margin: 0px; padding: 0px;"></div><div name="" style="border: 0px; box-sizing: border-box;
font-size: 15px; margin: 0px; padding: 0px;"><br /><div style="text-align: center;"> <br /></div><div style="text-align:
left;">&nbsp;<Slave</div><div style="text-align: center;">&nbsp;</div><br
style="box-sizing: border-box;" /></div><div style="border: 0px; box-sizing: border-box;
margin: 0px; padding: 0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px;"><div style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px;
padding: 0px;"><b>Listing Program:</b></div><div style="border: 0px; box-sizing:
border-box; font-size: 15px; margin: 0px; padding: 0px;"><b>&nbsp;</b></div><div
style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px; padding:
0px;"><span><span style="font-family: courier;">// Master<br />#include &lt;Keypad.h>; //
Library untuk keypad<br />#include &lt;Wire.h>;&nbsp;&nbsp;&nbsp; // Library untuk I2C
communication<br /><br />// Deklarasi jumlah baris dan kolom keypad beserta
karakternya<br />const byte ROWS = 4;<br />const byte COLS = 3;<br />char
keys[ROWS][COLS] = {<br />&nbsp;&nbsp;&nbsp; {'A', 'B', 'C'},<br />&nbsp;&nbsp;&nbsp; {'D', '5', '6'},<br />&nbsp;&nbsp;&nbsp; {'7',
'8', '9'},<br />&nbsp;&nbsp;&nbsp; {'*', '0', '#'}<br />};<br /><br />// Pin yang digunakan untuk
menghubungkan keypad dengan Arduino<br />char rowPins[ROWS] = {9, 8, 7, 6};<br />char

```

```

colPins[COLS] = {5, 4, 3};  

// Inisialisasi objek Keypad  

Keypad keypad =  

Keypad(makeKeymap(keys), rowPins, colPins, ROWS, COLS);  

void setup() {  

  Wire.begin(); // Memulai komunikasi I2C  

  void loop() {  

    // Mendapatkan karakter yang ditekan pada keypad  

    char key =  

    keypad.getKey();  

    if (key) {  

      // Mengirim karakter  

      melalui komunikasi I2C  

      Wire.beginTransmission(4); // Mulai  

      transmisi ke perangkat dengan alamat #4  

      Wire.write(key);  

      Wire.endTransmission(); // Berhenti transmisi  

    }  

    // Slave Versi Biasa  

    #include <LiquidCrystal.h>  

    #include  

    <Wire.h>  

    // Inisialisasi objek lcd dengan pin yang sesuai  

    LiquidCrystal  

    lcd(12, 11, 5, 4, 3, 2);  

    // Variabel untuk menyimpan posisi kolom dan baris saat  

    ini  

    int col = 0; // Kolom saat ini (dimulai dari 0)  

    int row = 0; // Baris saat ini (dimulai  

    dari 0)  

    void setup() {  

      // Mulai LCD dengan ukuran 16x2  

      lcd.begin(16, 2);  

      // Mulai komunikasi dengan bus I2C dengan  

      alamat #4  

      Wire.begin(4);  

      // Daftarkan fungsi  

      receiveEvent() sebagai event ketika data diterima dari master  

      Wire.onReceive(receiveEvent);  

      // Mulai komunikasi serial dengan  

      kecepatan 9600 bps  

      Serial.begin(9600);  

      void loop() {  

        // Tunda eksekusi program selama 100 milidetik  

        delay(100);  

        // Fungsi yang dieksekusi ketika data diterima dari master  

        void receiveEvent(int  

        howMany) {  

          // Baca data yang diterima sebagai karakter  

          char c =  

          Wire.read();  

          // Tampilkan karakter yang diterima melalui  

          komunikasi serial  

          Serial.println(c);  

          // Periksa apakah  

          posisi kolom sudah melebihi batas LCD  

          if (col >= 16) {  

            col = 0; // Reset ke posisi kolom awal  

            row++; // Pindah ke baris berikutnya  

            // Periksa apakah sudah mencapai batas baris LCD  

            if (row >= 2)  

            {  

              row = 0; // Kembali ke baris awal  

            }  

            // Set posisi  

            kursor LCD ke posisi baru  

            lcd.setCursor(col, row);  

            // Tampilkan karakter yang diterima ke LCD  

            lcd.write(c);  

            // Pindah ke kolom berikutnya  

            col++;  

          }  

        }  

      }  

    }  

  }  

}

```

5. Kondisi

[Kembali]

Key A - D

menampilkan huruf A - D secara berurut, huruf yang ditampilkan mengalami scroll ke kanan pada kolom pertama

15px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">6. Video Simulasi [Kembali]</p><div class="separator" style="clear: both; text-align: center;"><object class="BLOG_video_class" contentid="edc3051fa5aaee5f" height="266" id="BLOG_video-edc3051fa5aaee5f" width="320"></object></div>

<div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 0px; box-sizing: border-box; font-weight: 400; margin: 0px; padding: 0px; text-align: -webkit-center;"><p style="border: 0px; box-sizing: border-box; margin: 0px 0px 1px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">7. Link Download [Kembali]</p></div></div></div><p style="border: 0px; box-sizing: border-box; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: left;">
 Download HTML
 Download Rangkaian
 Download Program
 Download Video Simulasi
 Download Datasheet Keypad
 Download Datasheet LCD
 Download Datasheet Arduino Uno
 <a href="https://drive.google.com/file/d/1fpfri3Et1siQcZyQ9WZM_YYsXMEsJB1I/view?usp=driv

[illegible]