

<p> </p><div class="theme-posts-title" style="background-color: white; border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: -7px 0px 8px; padding: 0px;"><h3 itemprop="name headline" style="border: 0px; box-sizing: border-box; color: #757575; 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-indent: -1px;">Mikro 2023 Percobaan 2 Modul 1</h3></div><div style="background-color: white; border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><br style="box-sizing: border-box;" /></div><div style="background-color: white; border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: center;">[KEMBALI KE MENU SEBELUMNYA]</div><div style="background-color: white; border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: center;">
</div><center style="background-color: white; border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="border: 2px dashed rgb(23, 128, 221); box-sizing: border-box; color: #444444; font-size: 15px; height: 240px; margin: 0px; overflow: auto; padding: 10px; width: 330px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;">DAFTAR ISI<br style="box-sizing: border-box;" /><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">1. Foto Hardware dan Diagram Blok</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">2. Prosedur Percobaan</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">3. Rangkaian Simulasi dan Prinsip Kerja</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">4. Flowchart dan Listing Program</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">5. Kondisi</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"><span style="font-family:

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%202024-03-01%20080927.png" style="margin-left: 1em; margin-right: 1em;"><br style="text-align: left;" /><div class="separator" style="clear: both;">
</div><div class="separator" style="clear: both;">
</div><div class="separator" style="clear: both; text-align: left;"> 2. Keypad
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</div><div class="separator" style="clear: both; text-align: left;"> 3. 7-Segment
</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;"> 4. Kabel Jumper</div><div class="separator" style="clear: both; text-align: left;">
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text-align: left;">Diagram Blok:</div><div
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text-align: justify;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;
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style="box-sizing: border-box;" /><div class="separator" style="clear: both; text-align:
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color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><div class="separator" style="border: 0px;
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border-box; margin: 0px; padding: 0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; text-align: left;"><h3 style="border: 0px; box-sizing:

border-box; color: #757575; 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 0px; position: relative; text-align: justify; text-indent: -1px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">2. Prosedur Percobaan [Kembali]</h3><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;">+ Rangkaian semua komponen </div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;">+ buat program di aplikasi arduino IDE</div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;">+ setelah selesai masukkan program ke arduino </div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;">+ jalankan program pada simulasi dan cobakan dengan modul</div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><br style="border: 0px; box-sizing: border-box;" /></div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><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;"><br style="border: 0px; box-sizing: border-box;" /><div class="separator" style="clear: both; text-align: center;"></div>
<div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px;

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font-weight: bold; margin: 0px; padding: 0px; text-align: justify;">Prinsip Kerja</div><div style="border:
0px; box-sizing: border-box; color: #444444; font-size: 15px; font-weight: bold; margin: 0px; padding:
0px; text-align: justify;"><br /></div><div style="border: 0px; box-sizing: border-box; margin: 0px;
padding: 0px; text-align: justify;"><div class="separator" style="border: 0px; box-sizing: border-box;
clear: both; margin: 0px; padding: 0px; text-align: left;"><div class="separator" style="border: 0px;
box-sizing: border-box; clear: both; margin: 0px; padding: 0px; text-align: justify;"><span style="color:
#444444;"><span style="font-size: 15px;">Pada rangkaian ini menggunakan komponen antara lain yaitu
mikrokontroler (ATMEGA328P-PU), push button, dan 7-segment.</span></span></div><div
class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px;
text-align: justify;"><span style="color: #444444;"><span style="font-size: 15px;"><br
/></span></span></div></div><div class="separator" style="border: 0px; box-sizing: border-box; clear:
both; margin: 0px; padding: 0px; text-align: justify;"><span style="color: #444444;"><span
style="font-size: 15px;">Prinsip kerja rangkaian ini ialah dimana&nbsp;</span></span><span
style="color: #444444; font-size: 15px;">push button yang merepresentasikan&nbsp;</span><span
style="color: #444444; font-size: 15px;">keypad 4x4 berfungsi sebagai input
sedangkan&nbsp;</span><span style="color: #444444; font-size: 15px;">7-segment</span><span
style="color: #444444; font-size: 15px;">&nbsp;</span></div><span
style="background-color: #1f272a; color: #0ca1a6; font-size: 14px; text-align: left; white-space:
pre;">char keys[ROWS][COLS] = {

{'4','3','2','1'},

{'D','C','B','A'}, // Keypad 4x4 layout

{'8','7','6','5'},&nbsp;</span><div class="separator" style="border: 0px; box-sizing: border-box; clear:
both; margin: 0px; padding: 0px; text-align: justify;"><span style="background-color: #1f272a; color:
#0ca1a6; font-size: 14px; text-align: left; white-space: pre;"> {'*', '0', '#', '9'}</span></div><div
class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px;
text-align: justify;"><span style="color: #444444; font-size: 15px;">Sesuai dengan program arduino yang
sudah di buat dimana terdapat array matrix 4x4 yang merepresentasikan layout keypad, yang
masing-masing karakter terkait dengan tombol pada keypad. Jadi apabila kita menekan tombol pada
keypad maka akan dimunculkan tulisan tombol tersebut di&nbsp;</span><span style="color: #444444;
font-size: 15px;">7-segment</span><span style="color: #444444; font-size:
15px;">.&nbsp;</span></div><div class="separator" style="border: 0px; box-sizing: border-box; clear:
both; margin: 0px; padding: 0px; text-align: justify;"><span style="color: #444444; font-size: 15px;">Jadi
apabila kita menekan button baris 2 kolom 2 maka&nbsp;</span><span style="color: #444444; font-size:
15px;">7-segment</span><span style="color: #444444; font-size: 15px;">&nbsp;</span>akan tertulis "C" selama
1 detik sebelum menghapusnya kembali, begitu pula bila menekan tombol pagar dan tombol bintang
dan tombol 0 - 9.</span></div><div class="separator" style="border: 0px; box-sizing: border-box; clear:
both; margin: 0px; padding: 0px; text-align: justify;"><span style="color: #444444; font-size: 15px;"><br
/></span></div></div></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;"><span
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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;

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box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">4. Flowchart dan Listing

Program </div>

href="http://www.laboreldi.or.id/p/mikro-2023-percobaan-1-modul-1.html#home" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease 0s;">[Kembali]</h3><div class="separator" style="clear: both; text-align: center;"></div><br

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;

color: #444444; font-size: 15px; margin: 0px; padding: 0px;">Listing Program:</div><div style="border:

0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><br

style="box-sizing: border-box;" /></div><div style="border: 0px; box-sizing: border-box; color: #444444;

font-size: 15px; margin: 0px; padding: 0px;"><br style="box-sizing: border-box;" /></div><div

style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><div style="background-color:

#1f272a; border: 0px; box-sizing: border-box; line-height: 19px; margin: 0px; padding: 0px;"><div

style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><span style="color:

#0ca1a6;">//Percobaan 2

#include <Keypad.h>

const byte ROWS = 4; // Four rows

const byte COLS = 4; // Fou columns

char keys[ROWS][COLS] = {

{ '4', '3', '2', '1' },

{ 'D', 'C', 'B', 'A' }, // Keypad 4x4 layout

{ '8', '7', '6', '5' },

{ '*', '0', '#', '9' }

```

};

byte rowPins[ROWS] = {A4, A3, A2, A1}; // Connect to the keypad row pins
byte colPins[COLS] = {10, 11, 12, 13}; // Connect to the keypad column pins
Keypad keypad = Keypad(makeKeymap(keys), rowPins, colPins, ROWS, COLS);
const int segmentPins[] = {9, 8, 7, 6, 5, 4, 3, 2}; // Connect to the seven-segment display segment pins
void setup() {
  for (int i = 0; i < 8; i++) {
    pinMode(segmentPins[i], OUTPUT);
  }
}

void loop() {
  char key = keypad.getKey();
  if (key) {
    displayCharacter(key);
    delay(1000);
    clearDisplay();
  }
}

void displayCharacter(char ch) {
  // Define segment patterns for each digit (0-9)
  // Example: Displaying '1'
  // A
  // F B
  // G
  // E C
  // D

  byte patterns[][9] = {
    {0, 0, 0, 0, 0, 0, 1, 1}, // 0
    {1, 0, 0, 1, 1, 1, 1, 1}, // 1
  }
}

```

```

{0, 0, 1, 0, 0, 1, 0, 1}, // 2
{0, 0, 0, 0, 1, 1, 0, 1}, // 3
{1, 0, 0, 1, 1, 0, 0, 1}, // 4
{0, 1, 0, 0, 1, 0, 0, 1}, // 5
{0, 1, 0, 0, 0, 0, 0, 1}, // 6
{0, 0, 0, 1, 1, 1, 1, 1}, // 7
{0, 0, 0, 0, 0, 0, 0, 1}, // 8
{0, 0, 0, 0, 1, 0, 0, 1}, // 9
{0, 0, 0, 0, 0, 1, 0, 1}, //a
{1, 1, 0, 0, 0, 0, 0, 1}, //b
{0, 1, 1, 0, 0, 0, 1, 1}, //c
{1, 0, 0, 0, 0, 1, 0, 1}, //d

```

```

};

if ((ch &gt;= '0' &amp;&amp; ch &lt;= '9') || (ch &gt;= 'A' &amp;&amp; ch &lt;= 'D')) {
    // Get the digit index (0-9) from the character
    int index = (ch &lt;= '9')? (ch - '0') : (ch - 'A' + 10);

    // Write the pattern to the segment pins
    for (int i = 0; i &lt; 7; i++) {
        digitalWrite(segmentPins[i], patterns[index][i]);
    }
}

void clearDisplay() {
    for (int i = 0; i &lt; 8; i++) {
        digitalWrite(segmentPins[i], HIGH);
    }
}

```

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</span></span></div><br style="box-sizing: border-box;" /></div></div></span></div><p
style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px;

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padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">
</p><p style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px 0px 15px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">5. Kondisi [Kembali]</p><p style="border: 0px; box-sizing: border-box; margin: 0px 0px 15px; padding: 0px; text-align: justify;"> Percobaan 2 Kondisi 2 : "Button baris 2 kolom 2 menampilkan huruf C"</p><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: -webkit-center;"><p style="border: 0px; box-sizing: border-box; margin: 0px 0px 15px; padding: 0px; text-align: justify;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">6. Video Demo [Kembali]</p><div class="separator" style="clear: both; text-align: center;"><object class="BLOG_video_class" contentid="f30023fae663743f" height="266" id="BLOG_video-f30023fae663743f" width="320"></object></div><div class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px; text-align: center;"><br style="box-sizing: border-box;" /></div><p style="border: 0px; box-sizing: border-box; margin: 0px 0px 15px; padding: 0px;"><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 <a href="#home" style="border: 0px; box-sizing:

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