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<p><span style="font-family: verdana;">&nbsp;</span></p><div class="theme-posts-title"
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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;"><a
href="http://www.laboreldi.or.id/p/mikro-2023-percobaan-1-modul-1.html" style="border: 0px;
box-sizing: border-box; color: #757575; margin: 0px; padding: 0px; text-decoration-line: none;
transition: all 0.3s ease 0s;"><span style="font-family: verdana;">Laporan Akhir Percobaan 2
Modul 1</span></a></h3></div><div style="background-color: white; border: 0px; box-sizing:
border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><span
style="font-family: verdana;"><br style="box-sizing: border-box;" /></span></div><div
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15px; margin: 0px; padding: 0px; text-align: center;"><a
href="https://rahmada212014.blogspot.com/p/mikro-2023-modul-1-kembali-ke-menu.html"
style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px;
text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family:
verdana;">[KEMBALI KE MENU SEBELUMNYA]</span></a></div><div
style="background-color: white; border: 0px; box-sizing: border-box; color: #444444; font-size:
15px; margin: 0px; padding: 0px; text-align: center;"><span style="font-family: verdana;"><br
/></span></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;"><span style="font-family: verdana;"><b style="border: 0px;
box-sizing: border-box; margin: 0px; padding: 0px;"><a name="home" style="border: 0px;
box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; transition: all 0.3s ease
0s;">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="#F" style="border:
0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line:
none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">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:
#597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease
0s;"><span style="font-family: verdana;">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: #597e00; margin: 0px; padding:
0px; text-decoration-line: none; transition: all 0.3s ease 0s;"><span style="font-family:
verdana;">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="#FL" style="border:
0px; box-sizing: border-box; color: #597e00; margin: 0px; padding: 0px; text-decoration-line:
none; transition: all 0.3s ease 0s;"><span style="font-family: verdana;">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:
#597e00; margin: 0px; padding: 0px; text-decoration-line: none; transition: all 0.3s ease

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0s;">5. Kondisi</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">6. Video Demo</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">7. Link Download</div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;"></div></div><h1 style="border: 0px; box-sizing: border-box; color: #757575; 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; margin: 0px; padding: 0px; text-align: left;">Laporan Percobaan 2</h1><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; text-align: left;">Keypad dan 7-segment</div><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; position: relative; text-align: justify; text-indent: -1px;"><b style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px; text-align: left;">1. <b style="border: 0px; box-sizing: border-box; letter-spacing: 0px; margin: 0px; padding: 0px; text-align: left;">Foto Hardware dan <b style="border: 0px; box-sizing: border-box; letter-spacing: 0px; margin: 0px; padding: 0px; text-align: left;">Diagram Blok [Kembali]</h3><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px; text-align: justify;"><span

[illegible]

[illegible]

AS6GIAkKqJYhL7-x2Js8fg/s555/Screenshot%202024-02-29%20224452.png" style="margin-left: 1em; margin-right: 1em;"></div>
<div class="separator" style="clear: both; text-align: center;">
</div></div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><div class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px;"><br style="box-sizing: border-box;" /></div></div><div style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><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; 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;">+ Rangkai 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="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="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; 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;">
</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;">Pada rangkaian ini menggunakan komponen antara lain yaitu mikrokontroler (ATMEGA328P-PU), push button, dan 7-segment.</div><div class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px; text-align: justify;">
</div></div><div class="separator" style="border: 0px; box-sizing: border-box; clear: both; margin: 0px; padding: 0px; text-align: justify;">Prinsip kerja rangkaian ini ialah dimana push button yang merepresentasikan keypad 4x4 berfungsi sebagai input sedangkan 7-segment </div><span

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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 degan 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></span></div><div style="border: 0px; box-sizing: border-box; margin:
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0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding: 0px;"><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; 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; font-size: medium; margin:
0px; padding: 0px;"><span style="border: 0px; box-sizing: border-box; margin: 0px; padding:
0px;"><a name="FL" style="border: 0px; box-sizing: border-box; color: #597e00; margin: 0px;
padding: 0px; transition: all 0.3s ease 0s;">4. Flowchart dan Listing
Program</a></span>&nbsp;<a
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]</a></span></b></h3><div class="separator"
style="clear: both; text-align: center;"><a
href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEhhzy7eYSdcrE78y7MqOIL
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GuFkR1aOhIJ1Oxoa8e4KjUJqkxM0cSC3pyojvUjDAhynGT0CfRCX5t4Wku5Kxzc4IZTU-4ycneU
Ok4uzCxi8bUsfPGw0/s390/WhatsApp%20Image%202024-02-29%20at%2021.15.04_7f98e929
.jpg" style="margin-left: 1em; margin-right: 1em;"></a></div><br /><div class="separator" style="clear: both; color: #444444; font-size: 15px; text-align: center;"><br /></div><div style="border: 0px; box-sizing: border-box; color: #444444; font-size: 15px; margin: 0px; padding: 0px;"><br style="box-sizing: border-box;" /><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; 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;"><span style="font-size: 14px; white-space: pre;">>//Percobaan 2

```
#include <Keypad.h>
const byte ROWS = 4; // Four rows
const byte COLS = 4; // Four 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 >= '0' && ch <= '9') || (ch >= 'A' && ch <= 'D')) {
 // Get the digit index (0-9) from the character
 int index = (ch <= '9')? (ch - '0') : (ch - 'A' + 10);
 // Write the pattern to the segment pins
 for (int i = 0; i < 7; i++) {
 digitalWrite(segmentPins[i], patterns[index][i]);
 }
 }
}

void clearDisplay() {
 for (int i = 0; i < 8; i++) {
 digitalWrite(segmentPins[i], HIGH);
 }
}
</div><br style="box-sizing: border-box;" /></div></div></div><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;"><span style="border: 0px; box-sizing: border-box; font-size:

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