<div style="text-align: center;">[KEMBALI KE MENU SEBELUMNYA]</div><div style="text-align: center;">
</div>

<center>

<div style="background-color: white; border: 2px dashed rgb(23, 128, 221); height: 240px; overflow: auto; padding: 10px; text-align: center; width: 330px;">

DAFTAR ISI

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

1. Prosedur</div>

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

2. Hardware dan Diagram Blok</div>

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

3. Rangkaian Simulasi dan Prinsip Kerja</div>

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

4. Flowchart dan Listing Program</div>

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

5. Video Demo</div>

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

6. Kondisi</div>

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

7. Download File</div></div><div style="text-align: justify;"><b style="text-align: left;"><div style="font-family: "Times New Roman"; font-weight: 400; text-align: center;">
</div><div style="font-family: "Times New Roman"; font-weight: 400; text-align: center;">MODUL 2</div><div style="font-family: "Times New Roman"; font-weight: 400; text-align: center;">PERCOBAAN 3</div></div><div style="text-align: justify;"><b style="text-align: left;">
</div><div style="text-align: justify;"><b style="text-align: left;">1. Prosedur [Kembali]</div><div style="text-align: justify;"><b style="text-align: left;"><ul style="background-color: white; font-family: times; font-size: 15.4px; font-weight: 400; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="margin: 0px 0px 0.25em; padding: 0px;">Rangkai semua komponen <li style="margin: 0px 0px 0.25em; padding: 0px;">Buat program di aplikasi arduino IDE
<li style="margin: 0px 0px 0.25em; padding: 0px;">Setelah selesai masukkan program ke arduino <li style="margin: 0px 0px

0.25em; padding: 0px;">Jalankan program pada simulasi dan cobakan dengan modul
<li style="margin: 0px 0px 0.25em; padding: 0px;">Lihat hasil pada 7-segment
</div><div style="text-align: justify;"><b style="text-align: left;">
</div><div><div style="font-weight: bold; text-align: justify;"><b style="text-align: left;">2. Hardware dan Diagram Blok [Kembali]</div><div class="separator" style="clear: both; text-align: center;">
<li style="text-align: left;">Hardware
<div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: left;"><ul style="text-align: left;">
Diagram Blok
</div></div><div>3. Rangkaian Simulasi dan Prinsip Kerja [Kembali]</div><div><ul style="text-align: left;">
Rangkaian Simulasi
<div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: center;">
</div><ul style="text-align: left;">
Prinsip Kerja
<div><div>Pada percobaan 3 Kondisi 1 diminta ketika 1 switch aktif 7 segment menghitung mudur dari 10. </div><div>Disini kita menggunakan dipswitch yang mana pin 1,2,3,4 dipswitch terhubung ke arduino A0, A1,A2,A3 dan dipswitch pin 5,6,7,8 terhubung ke ground. output akan ditampilkan pada 7 segment yang terhubung ke arduino uno. disana pada output 1, 2 pada 7 segment diberi resistor agar logika menjadi 0/1 (biru/merah) pada 7 segment, jika tidak ada resistor maka logika tidak ada (abu).</div><div> </div></div></div></div><div><div style="font-weight: bold; text-align: justify;"><b style="text-align: left;">4. Flowchart dan Listing Program [Kembali]</div><div style="text-align: justify;">
<li style="text-align: left;">Flowchart <div class="separator" style="clear: both; text-align: center;"><img border="0" data-original-height="432" data-original-width="541" height="349"

src="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEiG6lqib_aSWlUW59ooJPanaQof
-in5FvaqbDIPLWlZW9kQNFT1YaRm5PNZQVbs18wmnGWj6oAHSjnCAK1BDfK7qY7_tRHKF-aimN1bnQF
Dto7Qy_Zsd-wmqBGmNGMgs2ASNpZ7nmH8OWgijOs2So4vMVTi-hTp8yVNDiT3WhoM6gMvgY3_x5u
Ymwjrqas-/w413-h349/f%20P3.png" width="413" /></div><div class="separator" style="clear:
both; text-align: left;"><ul style="text-align: left;">
Listing
Program </div></div><div><b style="text-align: left;"><div style="background-color:
white; color: #4e5b61; font-family: Consolas, "Courier New", monospace; font-size: 14px;
font-weight: normal; line-height: 19px; white-space: pre;"><div><span style="color:
#728e00;">#define a <span style="color:
#005c5f;">6</div><div>#define <span style="color:
#d35400;">b 7</div><div><span style="color:
#728e00;">#define c <span style="color:
#005c5f;">8</div><div>#define <span style="color:
#d35400;">d 9</div><div><span style="color:
#728e00;">#define e <span style="color:
#005c5f;">10</div><div>#define <span style="color:
#d35400;">f 11</div><div><span style="color:
#728e00;">#define g <span style="color:
#005c5f;">12</div><div>#define <span style="color:
#d35400;">dp 13</div><div><span style="color:
#728e00;">#define D1 <span style="color:
#005c5f;">4</div><div>#define <span style="color:
#d35400;">D2 5</div><div><span style="color:
#728e00;">#define Dsw1 A0</div><div>#define Dsw2
A1</div><div>#define <span style="color:
#d35400;">Dsw3 A2</div><div>#define Dsw4 A3</div><div>bool
sw1,sw2,sw3,sw4;</div><div>int segments[] = {a, b, c, d, e, f, g<span style="color:
#434f54;">};</div><div>byte digitPatterns[10][7] = <span style="color:
#434f54;">{</div><div>{<span style="color:
#005c5f;">1, 1, <span style="color:
#005c5f;">1, 1, <span style="color:
#005c5f;">1, 1, <span style="color:
#005c5f;">0}, //
0</div><div>{<span style="color:
#005c5f;">0, 1, <span style="color:
#005c5f;">1, 0, <span style="color:
#005c5f;">0, 0, <span style="color:
#005c5f;">0}, //
1</div><div>{<span style="color:
#005c5f;">1, 1, <span style="color:
#005c5f;">0, 1, <span style="color:
#005c5f;">1, 0, <span style="color:
#005c5f;">1}, //
2</div><div>{<span style="color:

```
    1, 1, 1, 1, 0, 0, 1}, // 3
    {0, 1, 1, 0, 0, 1, 1}, // 4
    {1, 0, 1, 1, 0, 1, 1}, // 5
    {1, 0, 1, 1, 1, 1, 1}, // 6
    {1, 1, 1, 0, 0, 0, 0}, // 7
    {1, 1, 1, 1, 1, 1, 1}, // 8
    {1, 1, 1, 1, 0, 1, 1} // 9
};
void setup() {
for (int i = 0; i < 7; i++) {
pinMode(segments[i], OUTPUT);
}
pinMode(dp, OUTPUT);
pinMode(D1, OUTPUT);
pinMode(D2, OUTPUT);
```

```cpp
  pinMode(Dsw1, INPUT_PULLUP);
  pinMode(Dsw2, INPUT_PULLUP);
  pinMode(Dsw3, INPUT_PULLUP);
  pinMode(Dsw4, INPUT_PULLUP);
  Serial.begin(9600);
}
void number(int display) {
  if (display >= 0 && display <= 9) {
    for (int i = 0; i < 7; i++) {
      digitalWrite(segments[i], digitPatterns[display][i]);
    }
  }
}
void loop() {
  int sw1 = digitalRead(Dsw1);
  int sw2 = digitalRead(Dsw2);
  int sw3 = digitalRead(Dsw3);
  int sw4 = digitalRead(Dsw4);
  static int digit = 1; // Digit yang sedang ditampilkan (1 atau 2)
  static int count = 0; // Counter untuk digit
  static unsigned long lastTime = 0; // Waktu terakhir pembacaan tombol
  if (sw1 == LOW) {
    if (millis() - lastTime > 1000) { // Debouncing
      lastTime =
```

```cpp
millis();
count++;
if (count > 9) {
count = 0;
}
if (digit == 1) {
digitalWrite(D1, HIGH);
digitalWrite(D2, LOW);
number(count);
digit = 2;
} else {
digitalWrite(D1, LOW);
digitalWrite(D2, HIGH);
number(count);
digit = 1;
}
}
}
else if (sw2 == LOW) {
if (millis() - lastTime > 1000) { // Debouncing
lastTime = millis();
digitalWrite(D1, HIGH);
digitalWrite(D2, LOW);
for (int i = 9; i >= 0; i--) {
number(i);
delay(1000); // Delay agar Anda bisa melihat perubahan digit
}
}
}
if (sw3 == LOW) {
if (millis() - lastTime > 2000) {
```

```arduino
{ // Debouncing
lastTime = millis();
count++;
if (count > 9) {
count = 0;
}
if (digit == 1) {
digitalWrite(D2, HIGH);
digitalWrite(D1, LOW);
number(count);
digit = 2;
} else {
digitalWrite(D2, LOW);
digitalWrite(D1, HIGH);
number(count);
digit = 1;
}
}
}
else if (sw4 == LOW) {
if (millis() - lastTime > 2000) { // Debouncing
lastTime = millis();
digitalWrite(D2, HIGH);
digitalWrite(D1, LOW);
for (int i = 9; i >= 0; i--) {
number(i);
delay(200); // Delay agar Anda bisa melihat perubahan digit
}
}
}
}
```

5. Video Demo [Kembali]

center;"><iframe allowfullscreen="" class="BLOG_video_class" height="297" src="https://www.youtube.com/embed/Bx7F8Y2Ngw0" width="357" youtube-src-id="Bx7F8Y2Ngw0"></iframe></div>
<div class="separator" style="clear: both; text-align: center;">
</div></div><p style="text-align: justify;"><b style="text-align: left;">6. Kondisi [Kembali]</p><div style="text-align: justify;"> Percobaan 3 Timer Arduino</div><div style="text-align: justify;">
</div><div style="text-align: -webkit-center;"><p></p><div><b style="text-align: left;"><div style="font-weight: 400; text-align: -webkit-center;"><p style="text-align: justify;"><b style="text-align: left;">7. Download File [Kembali]</p><p style="text-align: justify;">HTML klik disini</p><p style="text-align: justify;">Gambar Hardware klik disini</p><p style="text-align: justify;">Gambar Simulasi klik disini</p><p style="text-align: justify;">Video Demo klik disin</p></div></div></div></div><div style="text-align: left;">Listring Program klik disini</div></center>