

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

[KEMBALI KE MENU SEBELUMNYA]</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. Kondisi</div>

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

6. Video demo</div>

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

7. Link Download</div>

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

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</center>

<div style="font-size: medium;">
</div><div style="text-align: center;">
</div><div style="color: #990000;"><span style="font-family:

"times" , "times new roman" , serif;">
</div>

1. Prosedur

[Kembali]<div> 1. Rangkai semua komponen sesuai percobaan.<div style="font-family: "Times New Roman"; font-size: medium;"><p class="MsoNormal"><o:p></o:p></p><p class="MsoNormal"> 2. Buat program di aplikasi arduino IDE.<o:p></o:p></p><p class="MsoNormal"> 3. Setelah selesai masukkan program ke arduino.<o:p></o:p></p><p class="MsoNormal"> 4. Jalankan program pada rangkaian dan cobakan sesuai dengan modul.<o:p></o:p></p><p class="MsoNormal"> 5. Selesai.</p></div><div><div><div>
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2. Hardware dan diagram blok

[Kembali]</div><div>
</div><div><div>Hardware</div><div>
</div><div>1. Arduino Uno</div><div><div class="separator" style="clear: both; text-align: center;"></div>

</div><div>2. Virtual Terminal</div><div><div class="separator" style="clear: both; text-align: center;">[Kembali]</div></div></div><div class="separator"
style="clear: both; text-align: center;">
</div></div><div class="separator" style="clear: both;
text-align: left;"><div class="separator" style="clear: both; text-align: justify;">Flowchart</div><div
class="separator" style="clear: both; text-align: center;"><a
href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEgNOq4vStMEK m0TFTcomp8m
wuED0Lu6Fvc5yDaeDGR8Ul w0JC2dVr7poYTDIkO8OH1CuUBIU2KR62Ryp0BGQ02u-1HPbNZILCPzj0UQb
bCPvheSKOTohdqzE1ACBynn7Xy683QCr_uQba3rfiFEaXJHUJoR3luRD KmTfg2NLWiBua5JP y5M2bW1k
MIMN x7M/s516/flowchart%20p5m3.jpg" style="margin-left: 1em; margin-right: 1em;"></div>
<div class="separator"
style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both;
text-align: justify;">Listing Program</div><div class="separator" style="clear: both; text-align:
justify;"><div class="separator" style="clear: both;">
</div><div class="separator" style="clear:
both;"><div class="separator" style="clear: both;"><div class="separator" style="clear:
both;">Master:</div><div class="separator" style="clear: both;"><div class="separator" style="clear:
both;"><div class="separator" style="clear: both;">//Master</div><div class="separator"
style="clear: both;">#include <Wire.h>></div><div class="separator" style="clear:
both;">#define SLAVE_ADDRESS 9 // Slave Arduino address</div><div class="separator" style="clear:
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both;">#define BUTTON1 2 // Pin for the push button</div><div class="separator" style="clear:
both;">#define BUTTON2 3</div><div class="separator" style="clear: both;">int buttonState1 =
0;</div><div class="separator" style="clear: both;">int buttonState2 = 0;</div><div class="separator"
style="clear: both;">int buttonPrevState1 = 0;</div><div class="separator" style="clear: both;">int
buttonPrevState2 = 0;</div><div class="separator" style="clear: both;">unsigned int counter =
0;</div><div class="separator" style="clear: both;">unsigned int count = 0;</div><div
class="separator" style="clear: both;">void setup() {</div><div class="separator" style="clear:
both;"> Wire.begin(); // Initialize I2C communication</div><div class="separator" style="clear:
both;"> pinMode(BUTTON1, INPUT_PULLUP); // Set button pin as input with internal pull-up
resistor</div><div class="separator" style="clear: both;"> pinMode(BUTTON2,
INPUT_PULLUP);</div><div class="separator" style="clear: both;"> Serial.begin(9600); //
Initialize serial communication for debugging</div><div class="separator" style="clear:
both;">}</div><div class="separator" style="clear: both;">void loop() {</div><div class="separator"
style="clear: both;"> buttonState1 = digitalRead(BUTTON1);</div><div class="separator"
style="clear: both;"> buttonState2 = digitalRead(BUTTON2);</div><div class="separator"
style="clear: both;">
</div><div class="separator" style="clear: both;"> if (buttonState2
!= buttonPrevState2){</div><div class="separator" style="clear: both;"> if(buttonState2 ==
LOW){</div><div class="separator" style="clear: both;"> count++;</div><div class="separator"
style="clear: both;"> }</div><div class="separator" style="clear:
both;"> delay(50);</div><div class="separator" style="clear: both;"> }</div><div
class="separator" style="clear: both;"> buttonPrevState2 = buttonState2;</div><div
class="separator" style="clear: both;"> if(count > 3){</div><div class="separator"
style="clear: both;"> count = 0;</div><div class="separator" style="clear:
both;"> }</div><div class="separator" style="clear: both;"> if(count % 2 == 0){</div><div
class="separator" style="clear: both;"> if (buttonState1 != buttonPrevState1) {</div><div
class="separator" style="clear: both;"> if (buttonState1 == LOW) {</div><div class="separator"
style="clear: both;"> // Button is pressed</div><div class="separator" style="clear:
both;"> counter++;</div><div class="separator" style="clear:
both;"> Wire.beginTransmission(SLAVE_ADDRESS);</div><div class="separator" style="clear:
both;"> Wire.write(counter); // Send command to the slave</div><div class="separator"
style="clear: both;"> Wire.endTransmission();</div><div class="separator" style="clear:
both;"> }</div><div class="separator" style="clear: both;"> delay(50); // Debouncing
delay</div><div class="separator" style="clear: both;"> }</div><div class="separator"
style="clear: both;">
</div><div class="separator" style="clear:
both;"> buttonPrevState1 = buttonState1;</div><div class="separator" style="clear:
both;"> if(counter > 3){</div><div class="separator" style="clear: both;"> counter =
0;</div><div class="separator" style="clear: both;"> }</div><div class="separator"
style="clear: both;">}else if(count % 3 == 0){</div><div class="separator" style="clear:
both;"> Wire.endTransmission();</div><div class="separator" style="clear: both;">}</div><div
class="separator" style="clear: both;"> Serial.print(count); Serial.println(counter);</div><div
class="separator" style="clear: both;">}</div></div><div class="separator" style="clear: both;">
</div><div class="separator" style="clear: both;">Slave:</div><div class="separator" style="clear:
both;"><div class="separator" style="clear: both;"><div class="separator" style="clear:
both;">//Slave</div><div class="separator" style="clear: both;">#include <Wire.h><</div><div
class="separator" style="clear: both;">#define LED_COUNT 8</div><div class="separator"
style="clear: both;">#define LED_PIN_START 2 // Start pin for the LEDs</div><div class="separator"
style="clear: both;">void setup() {</div><div class="separator" style="clear:
both;"> Serial.begin(9600);</div><div class="separator" style="clear:

```

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both;"> Wire.begin(9); // Initialize I2C communication as Slave with address 9</div><div
class="separator" style="clear: both;"> Wire.onReceive(receiveEvent); // Register event for
receiving data</div><div class="separator" style="clear: both;"> for (int i = LED_PIN_START; i
<< LED_PIN_START + LED_COUNT; i++) {</div><div class="separator" style="clear:
both;"> pinMode(i, OUTPUT); // Set LED pins as output</div><div class="separator"
style="clear: both;"> </div><div class="separator" style="clear: both;"></div><div
class="separator" style="clear: both;">void loop() {</div><div class="separator" style="clear:
both;"> // Nothing to do here, all actions are performed in the receiveEvent
function</div><div class="separator" style="clear: both;"></div><div class="separator" style="clear:
both;">void receiveEvent(int numBytes) {</div><div class="separator" style="clear:
both;"> unsigned int command = Wire.read(); // Read incoming command from
master</div><div class="separator" style="clear: both;"> Serial.println(command);</div><div
class="separator" style="clear: both;"> delay(500);</div><div class="separator" style="clear:
both;"> if (command == 1) {</div><div class="separator" style="clear: both;"> // Turn all
LEDs ON</div><div class="separator" style="clear: both;"> for (int i = LED_PIN_START; i <
LED_PIN_START + LED_COUNT; i++) {</div><div class="separator" style="clear:
both;"> digitalWrite(i, HIGH);</div><div class="separator" style="clear:
both;"> }</div><div class="separator" style="clear: both;"> } else if (command == 2)
{</div><div class="separator" style="clear: both;"> // Turn all LEDs OFF</div><div
class="separator" style="clear: both;"> for (int i = LED_PIN_START; i < LED_PIN_START +
LED_COUNT; i++) {</div><div class="separator" style="clear: both;"> digitalWrite(i,
LOW);</div><div class="separator" style="clear: both;"> }</div><div class="separator"
style="clear: both;"> } else if (command == 3) {</div><div class="separator" style="clear:
both;"> // Blink all LEDs</div><div class="separator" style="clear: both;"> for (int j = 0; j
<< 5; j++) { // Repeat the blinking 5 times</div><div class="separator" style="clear:
both;"> for (int i = LED_PIN_START; i < LED_PIN_START + LED_COUNT; i++) {</div><div
class="separator" style="clear: both;"> digitalWrite(i, HIGH);</div><div class="separator"
style="clear: both;"> delay(1000);</div><div class="separator" style="clear:
both;"> }</div><div class="separator" style="clear: both;"> delay(500); // Delay for ON
state</div><div class="separator" style="clear: both;"> for (int i = LED_PIN_START; i <
LED_PIN_START + LED_COUNT; i++) {</div><div class="separator" style="clear:
both;"> digitalWrite(i, LOW);</div><div class="separator" style="clear:
both;"> delay(1000);</div><div class="separator" style="clear: both;"> }</div><div
class="separator" style="clear: both;"> delay(500); // Delay for OFF state</div><div
class="separator" style="clear: both;"> }</div><div class="separator" style="clear:
both;"> }</div><div class="separator" style="clear: both;"></div><div class="separator"
style="clear: both;">
</div></div></div></div></div></div></div><span style="color:
#990000; font-family: times; font-size: medium;">

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<span><span><b>

5. Kondisi</b>

<a name="kondisi"></a>

<a href="#home">[Kembali]</a></span></span></span></div><div><span style="font-family: times; font-size: medium;"><br /></span></div><div><span style="font-family: times; font-size: medium;">Modul 3 Percobaan 5 Komunikasi I2C</span></div><div><div class="separator" style="clear: both; text-align: center;"><br /></div></div><span style="color: #990000; font-family: times; font-size: medium;">

<span><span><b>

6. Video demo</b>&nbsp;<a name="video"></a><a href="#home">[Kembali]</a></span></span></span></div><div style="text-align: center;"><span style="color: #990000; font-family: times; font-size: medium;"><div class="separator" style="clear: both; text-align: center;"><br /></div><div class="separator" style="clear: both; text-align: center;"><object class="BLOG\_video\_class" contentid="39e1c0b654662666" height="266" id="BLOG\_video-39e1c0b654662666" width="320"></object></div><div class="separator" style="clear: both; text-align: center;"><br /></div></span></div><div><span style="color: #990000; font-family: times; font-size: medium;"><span><span><b>

7. Link Download</b>

<a name="link"></a>

<a href="#home">[Kembali]</a></span></span></span><br /><div><span style="font-family: times;">D<span style="text-align: justify; text-indent: 14.15pt;">ownload HTML&nbsp;</span></span><span style="font-family: times; text-align: justify; text-indent: 18.8667px;">klik disini</span></div><div><span style="font-family: times;"><span style="text-align: justify; text-indent: 14.15pt;"><span style="font-family: times; text-align: left; text-indent: 0px;">D</span><span style="font-family: times; text-indent: 14.15pt;">ownload Simulasi Rangkaian&nbsp;</span></span></span><span style="font-family: times; text-align: justify; text-indent: 18.8667px;"><a href="https://drive.google.com/file/d/1-BSYZLqQqI7mVm28k\_VzBMOo2R7yV0JL/view?usp=sharing">klik disini</a></span></div><div><span style="font-family: times; text-indent: 18.8667px;">D</span><span style="font-family: times; text-align: justify; text-indent: 14.15pt;">ownload Video Demo&nbsp;</span><span style="font-family: times; text-align: justify; text-indent: 18.8667px;"><a href="https://drive.google.com/file/d/15QnVb1W7wi2ekE7FVvKon6g0jPkR1t5q/view?usp=sharing">klik disini</a></span></div><div><div><div><span style="font-family: times;">D</span><span style="font-family: times; text-align: justify; text-indent: 14.15pt;">ownload Listing Program&nbsp;</span><span style="font-family: times; text-align: justify; text-indent: 18.8667px;"><a href="https://drive.google.com/drive/folders/1QCwEqYMo0gRI0NpD2Sv6nawfqc2QQ1ko?usp=sharing">klik disini</a></span></div><div><span style="font-family: times;"><span style="text-align: justify; text-indent: 14.15pt;">Download Library Arduino Uno&nbsp;<a href="https://drive.google.com/file/d/1024\_4EiNdC4YnTswSji20JQP7kpXTKnv/view?usp=drive\_link">klik disini</a></span></span></div><div><span style="font-family: times;"><span style="text-align: justify; text-indent: 14.15pt;">Donwload Datasheet Arduino Uno&nbsp;<a href="https://drive.google.com/file/d/1tRs15LxOaOMDtB9zWn890zYmBwfarc\_Y/view?usp=drive\_link">klik disini</a></span></span></div><div><span style="font-family: times;"><span style="text-align: justify; text-indent: 14.15pt;"><span style="text-indent: 18.8667px;">Donwload Datasheet Push Button <a href="https://drive.google.com/file/d/16AjReJU3wPqxidmlsvirC94KMWP52YgB/view?usp=drive\_link">klik disini</a></span></span></span></div><div><span style="font-family: times;"><span style="text-align: justify; text-indent: 14.15pt;"><span style="text-indent: 18.8667px;">Donwload Datasheet LED&nbsp;</span></span></span><span style="font-family: times; text-align: justify; text-indent: 18.8667px;"><a href="https://drive.google.com/file/d/16-VjrsO5RuWmYjjFaYoCbNbatHxjBEc/view?usp=sharing">klik disini</a></span></div></div><div><br /></div></div><div><br /></div><p>

class="MsoBodyText" style="line-height: 115%; margin-bottom: 0cm; margin-left: 29.4pt; margin-right: 5.75pt; margin-top: 2.05pt; margin: 2.05pt 5.75pt 0cm 29.4pt; text-align: justify; text-indent: 14.15pt;"><span lang="id"><o:p></o:p></span></p>

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