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<br />
<div style="text-align: center;">
<a href="#">[KEMBALI KE MENU SEBELUMNYA]</a></div>
<br />
<center>
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overflow: auto; padding: 10px; text-align: center; width: 330px;">
<b>DAFTAR ISI</b>
<br />
<div style="text-align: left;">
<a href="#kondisi">1. Prosedur</a></div>
<div style="text-align: left;">
<a href="#gambar">2. Hardware dan diagram blok</a></div>
<div style="text-align: left;">
<a href="#video">3. Rangkaian Simulasi dan Prinsip kerja</a></div>
<div style="text-align: left;">
<a href="#prinsip">4. FlowChart</a></div>
<div style="text-align: left;">
<a href="#link">5.Kondisi</a></div>
<div style="text-align: left;">
<a href="#link">6.Video Simulasi</a></div>
<div style="text-align: left;">
<a href="#link">7.Download File</a></div><div style="text-align: left;"><br
/></div></div></center><span><span><b><span style="font-family: georgia; font-size:
medium;"><div style="color: #38761d; text-align: center;"><br /></div><div style="text-align:
center;"><br /></div><div style="text-align: center;"><span>PERCOBAAN 4</span><span
style="color: #01ffff;">&nbsp;</span></div><div style="text-align: center;"><span
style="color: #01ffff;">Keypad dan LCD</span></div><div style="text-align: center;"><br
/></div><div style="color: #38761d;"><span><span><b><span style="color: #38761d;
font-family: georgia; font-size: medium;"><br /></span></b></span></span></div><span
style="color: #01ffff;">1. Prosedur</span></span></b><span style="font-family: georgia;
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<a name="kondisi"></a>
<a href="#home"><span style="color:
#2b00fe;">[Kembali]</span></a></b></span></span></span></div><span style="color:
#741b47; font-family: georgia; font-size: medium;"><b><br /></b></span></div><span
style="font-family: georgia; font-size: medium;"><div>1. Rangkai semua komponen sesuai
kondisi yang dipilih</div><div>2. Buat program di aplikasi arduino IDE</div><div>3. Setelah
selesai masukkan program ke arduino di proteus</div><div>4. Jalankan program pada
simulasi dan cobakan sesuai dengan modul dan kondisi</div><div>5. Selesai</div><div
style="color: #741b47;"><b><br /></b></div></span><div><div><div>
<span style="font-family: georgia; font-size: medium;"><b><span><span><span
style="color: #01ffff;">2. Hardware dan diagram blok</span><span style="color: #38761d;">
</span><span><a name="gambar"></a></span>

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[\[Kembali\]</div><div>
</div><div>A. Hardware</div><div> </div><div>1. Sensor Touch</div><div><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; text-align: center;"></div>

</div>

</div><div>2. LCD</div><div class="separator" style="clear: both; text-align: center;"><div class="separator" style="clear: both; text-align: center;"></div>
</div><div></div><div>3. Arduino Uno</div><div class="separator" style="clear: both; text-align: center;"><a](#home)

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style="font-family: georgia; font-size: medium; "><span style="font-weight: bold; "><div
class="separator" style="clear: both; text-align: center; "><br /></div>A. Listing
Program<br /><br /></span></span></div><div><span><span style="color: #666666;
font-family: inherit; font-size: medium; "><i><div>#include
<LiquidCrystal.h>&nbsp;</div><div>#include <Keypad.h></div><div><br
/></div><div><span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; font-style: normal; white-space:
pre; ">// Deklarasi pin keypad</span></div><div>const byte ROWS = 4;&nbsp;<span
style="background-color: white; color: #95a5a6; font-family: Consolas, 'Courier
New'>, monospace; font-size: 14px; white-space: pre; ">// Jumlah baris
keypad</span></div></i><i><div>const byte COLS = 4;&nbsp;<span
style="background-color: white; color: #95a5a6; font-family: Consolas, 'Courier
New'>, monospace; font-size: 14px; white-space: pre; ">// Jumlah kolom
keypad</span></div></i><i><div><br /></div><div>LiquidCrystal lcd(A0, A1, A2, A3, A4,
A5);&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">// Deklarasi pin
LCD</span></div></i><i><div><br /></div><div>char hexaKeys[ROWS][COLS] =
</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">{ '1', '2', '3', 'A'},</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">{ '4', '5', '6', 'B'},</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">{ '7',
'8', '9', 'C'},</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">{ '*', '0', '#', 'D'},</div><div><br /></div><div>byte
rowPins[ROWS] = {9, 8, 7, 6};&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">// Pin baris keypad</span></div></i><i><div>byte colPins[COLS] = {5, 4, 3,
2};&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">// Pin kolom
keypad</span></div></i><i><div><br /></div><div>Keypad customKeypad =
Keypad(makeKeymap(hexaKeys), rowPins, colPins, ROWS, COLS);</div><div>const int
touchPin = 2; // Touch sensor terhubung ke port 2 di Arduino Uno</div><div><br
/></div><div>bool touchMode = false;</div><div><br /></div><div>void setup()
</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.begin(16, 2);&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">// Mengatur jumlah kolom dan baris
LCD</span></div></i><i><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">pinMode(touchPin, INPUT);&nbsp;<span
style="background-color: white; color: #95a5a6; font-family: Consolas, 'Courier
New'>, monospace; font-size: 14px; white-space: pre; ">// Mengatur pin sensor touch
sebagai input</span></div></i><i><div><br /></div><div>void loop()
</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">char customKey = customKeypad.getKey();&nbsp;<span
style="background-color: white; color: #95a5a6; font-family: Consolas, 'Courier
New'>, monospace; font-size: 14px; white-space: pre; ">// Membaca tombol yang
ditekan pada keypad</span></div></i><i><div><br /></div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">if
(digitalRead(touchPin) == HIGH) {</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.setCursor(0,
1);</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.print("Touch Mode: ON ");</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">touchMode = true;</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">} else {</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.setCursor(0,
1);</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.print("Touch Mode: OFF");</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">touchMode = false;</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">}</div><div><br /></div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">if (customKey)
</div><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.setCursor(0, 0);&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">// Mengatur posisi kursor di baris 1 kolom
1</span></div></i><i><div>&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">&nbsp;&nbsp;<span style="background-color: white; color: #95a5a6; font-family: Consolas,
'Courier New'>, monospace; font-size: 14px; white-space: pre; ">lcd.print("Tombol : ");&nbsp;<span

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style="background-color: white; color: #95a5a6; font-family: Consolas, &quot;Courier
New&quot;;, monospace; font-size: 14px; white-space: pre;">// Menampilkan teks "Tombol: "
di LCD</span></div></i><i><div>&nbsp; &nbsp; &nbsp; lcd.print(customKey);&nbsp; <span
style="background-color: white; color: #95a5a6; font-family: Consolas, &quot;Courier
New&quot;;, monospace; font-size: 14px; white-space: pre;">// Menampilkan tombol yang
ditekan di LCD</span></div></i><i><div>&nbsp; &nbsp; &nbsp; if (touchMode) {</div><div>&nbsp; &nbsp;
&nbsp; &nbsp; // Proses sesuai dengan mode touch</div><div>&nbsp; &nbsp; &nbsp; &nbsp; //
Misalnya, tambahkan logika khusus di sini</div><div>&nbsp; &nbsp; &nbsp; } else
{</div><div>&nbsp; &nbsp; &nbsp; &nbsp; // Proses sesuai dengan mode keypad</div><div>&nbsp; &nbsp;
&nbsp; &nbsp; // Misalnya, tambahkan logika khusus di sini</div><div>&nbsp; &nbsp;
}</div><div>&nbsp; &nbsp; }</div><div></i></span></span></div><div><span
style="font-family: georgia; font-size: medium;"><span style="font-weight: bold;"><br
/></span></span></div><div><span style="font-family: georgia; font-size: medium;"><span
style="font-weight: bold;"><br /></span></span></div><div><span style="font-family:
georgia; font-size: medium;"><span style="font-weight: bold;">B.
Flowchart</span></span></div><div><span style="font-family: georgia; font-size:
medium;"><span style="font-weight: bold;"><br /></span></span></div><div><span
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FreeSans, sans-serif; font-size: 16.5px;">Download HMTL Klik disini</div><div style="font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;">Download Simulasi Rangkaian Klik disini</div><div style="font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;">Download Video Simulasi Klik disini</div><div style="font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;">Download Datasheet ARDUINO UNO klik disini</div><div style="font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;">Download Datasheet TOUCH SENSOR klik disini</div><div style="font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;">Download Datasheet LCD 2X16 klik disini</div></div></div></div>