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<a name="home"></a>
<span style="font-size: medium;"><br />
</span><div style="text-align: center;">
    <span style="font-size: medium;"><a
href="https://akmal211046.blogspot.com/p/modul-1-praktikum-up-uc.html">[KEMBALI KE
MENU SEBELUMNYA]</a>
</span></div>
<span style="font-size: medium;"><br />
</span><center>
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overflow: auto; padding: 10px; text-align: center; width: 330px;">
    <span style="font-size: medium;"><b>DAFTAR ISI</b>
    <br />
    </span><div style="text-align: left;">
        <span style="font-size: medium;"><a href="#kondisi">1. Prosedur</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#gambar">2. Hardware dan
diagram blok</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#rangkaian">3. Rangkaian
Simulasi dan Prinsip kerja</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#prinsip">4. FlowChart</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#kondisi">5.Kondisi</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#video">6.Video Simulasi</a>
    </span></div>
    <div style="text-align: left;">
        <span style="font-size: medium;"><a href="#download">7.Download File</a>
    </span></div>
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</div>
</center><span><span><b><span style="font-size: medium;">
<div style="color: #38761d; font-family: georgia; text-align: center;">
    <b style="color: black; font-family: arial; text-align: left;"><br /></b>
</div>
<div style="color: #38761d; text-align: center;">
    <b style="color: black; font-family: arial; text-align: left;">Percobaan 3 Kondisi 4<br
/></b><span id="docs-internal-guid-bd00127c-7fff-2705-defd-5d518e176a51"><span
style="color: black; font-variant-alternates: normal; font-variant-east-asian: normal;

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font-variant-numeric: normal; font-variant-position: normal; vertical-align: baseline; white-space-collapse: preserve;"><span style="font-family: arial;">Ketika 1 switch aktif dot matrix akan menampilkan angka 5,7,7</span></span></div>
<div style="color: #38761d; font-family: georgia;">
    <span><span><b><span style="color: #38761d; font-family: georgia; font-size: medium;"><br /></span></b></span></span>
</div><span style="font-family: georgia;">
1. Prosedur</span></span></b><span style="font-family: georgia; font-size: medium;"><b>
<span style="color: #741b47;"><a name="kondisi"></a></span>
<a href="#home" style="color: #741b47;">[Kembali]</a></b></span></span></div><ul style="background-color: white; color: #222222; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="margin: 0px 0px 0.25em; padding: 0px;"><span style="border: 0px; box-sizing: border-box; font-family: georgia; font-size: medium; margin: 0px; padding: 0px;">Rangkailah semua komponen&nbsp;</span></li><li style="margin: 0px 0px 0.25em; padding: 0px;"><span style="font-family: georgia; font-size: medium;">Buat program di aplikasi arduino IDE</span></li><li style="margin: 0px 0px 0.25em; padding: 0px;"><span style="font-family: georgia; font-size: medium;">Setelah selesai, masukkan program ke arduino&nbsp;</span></li><li style="margin: 0px 0px 0.25em; padding: 0px;"><span style="font-family: georgia; font-size: medium;">Jalankan program pada simulasi dan lakukan sesuai kondisi</span></li></ul></div><div><span style="font-size: medium;"><span style="font-family: georgia;"><b><br /></b></span>
</span></div>
<div>
    <div>
        <div>
            <span style="font-family: georgia; font-size: medium;"><b><span><span><span>2. Hardware dan diagram blok</span><span style="color: #38761d;"></span><span style="color: #741b47;"><a name="gambar"></a></span>
                <a href="#home" style="color: #741b47;">[Kembali]</a></span></span></b></span></div>
            <div>
                <span style="font-size: medium;"><span style="font-family: georgia;"><b><span>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~
                    </span></div><div><ul style="text-align: left;"><li><span style="font-family: georgia; font-size: medium;">arduino uno</span></li><li><span style="font-family: georgia; font-size: medium;">dot matrix 8x8</span></li><li><span style="font-family: georgia; font-size: medium;">ic max7219</span></li><li><span style="font-family: georgia; font-size: medium;">dipswitch</span></li></ul></div><div><span style="font-family: georgia; font-size: medium;"><span><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/a/AVvXsEjqmZ2EDw31h4owiv8tHXW_Ndk yz6lQTpMa6TcjywOS6M1Ddit5C_ZW-vG-uLgtdQFGA-IKuBQwFwr1o1BLAhB6EqQiBqrdHW 9We2e6WQgk2C725q2RgTvTdqqg8rDeJV65KT9j5qNW_WgLQ-G1LDY7VdRHugdSi11i-pLOd5FPY5mkGVanTulUA_3yY0Q" style="margin-left: 1em; margin-right: 1em;"><li><span style="font-family: georgia; font-size: medium;">arduino uno</span></li><li><span style="font-family: georgia; font-size: medium;">dot matrix 8x8</span></li><li><span style="font-family: georgia; font-size: medium;">ic max7219</span></li><li><span style="font-family: georgia; font-size: medium;">dipswitch</span></li></ul></div><div><span style="font-family: georgia; font-size: medium;"><span><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/a/AVvXsEjqmZ2EDw31h4owiv8tHXW_Ndk yz6lQTpMa6TcjywOS6M1Ddit5C_ZW-vG-uLgtdQFGA-IKuBQwFwr1o1BLAhB6EqQiBqrdHW 9We2e6WQgk2C725q2RgTvTdqqg8rDeJV65KT9j5qNW_WgLQ-G1LDY7VdRHugdSi11i-pLOd5FPY5mkGVanTulUA_3yY0Q" style="margin-left: 1em; margin-right: 1em;"></a></div><br /><br  
</span></span></div>

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<span style="font-size: medium;"><span style="font-family:  
georgia;"><b><span>&nbsp; &nbsp; &nbsp; &nbsp;b. Digram Blok</span></b></span>

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medium;"><b><div class="separator" style="clear: both; text-align: center;"><a  
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<span style="font-size: medium;"><span style="font-family:  
georgia;">

<span style="font-weight: bold;"><span><span>3. Rangkaian  
Simulasi dan Prinsip kerja</span>

<span style="color: #741b47;"><a  
name="rangkaiannya"></a></span>

<a href="#home" style="color:  
#741b47;">[Kembali]</a></span></span></span>

</span></div><div><ul style="text-align: left;"><li><span  
style="font-family: georgia; font-size: medium;">Gambar rangkaian sebelum  
disimulasikan</span></li></ul><div><span style="font-family: georgia; font-size:  
medium;"><div class="separator" style="clear: both; text-align: center;"><a  
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style="text-align: left;"><li><span style="font-family: georgia; font-size: medium;">Gambar  
rangkaiannya setelah disimulasikan</span></li></ul><div><span style="font-family: georgia;  
font-size: medium;"><div class="separator" style="clear: both; text-align: center;"><a  
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OQNb9lqrEDZejaPcWJsdKyXAYozbltuNO\_ZaRcLERnTra9NbECuWgCuPEkbsb7G3-sNwL

aNNFPXqmVg6-HlpNHK-S9L98" style="margin-left: 1em; margin-right: 1em;"></a></div><div class="separator" style="clear: both; text-align: center;"><br /></div><div class="separator" style="clear: both; text-align: left;">Prinsip Kerja :</div><div class="separator" style="clear: both; text-align: left;">Ketika hanya 1 switch yang dihidupkan maka dot matrix akan menampilkan angka 5 lalu 5 lagi kemudian angka 7. Dan ketika dua atau lebih switch hidup maka dot matrik tidak akan menampilkan angka.&nbsp;<br /><br />Hal ini disebabkan oleh fungsi pada codingan yang mana memiliki syarat bahwa ketika hanya 1 switch yang dihidupkan maka baru ditampilkan angka pada dot matrix.</div><br /><br /></span></div></div>

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<span style="font-size: medium;"><span style="font-family: georgia;">  
<span style="font-weight: bold;"><span><span>4.  
FlowChart</span>  
<span style="color: #741b47;"><a name="prinsip"></a></span>  
<a href="#home" style="color: #741b47;">[Kembali]</a></span></span></div>  
<div>  
<span style="font-size: medium;"><span style="font-family: georgia;"><span style="font-weight: bold;">a. Listing Program&nbsp;<br /></span></span></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;"><div style="background-color: white; color: #4e5b61; font-family: Consolas, &quot;Courier New&quot;; monospace; font-weight: normal; line-height: 19px; white-space: pre;"><div><span style="color: #728e00;">#include</span> <span style="color: #005c5f;">&lt;LedControl.h&gt;</span></div><br /><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> numSwitches = <span style="color: #005c5f;">8</span>;</div><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> <span style="color: #d35400;">switches</span>[numSwitches] = <span style="color: #434f54;">{</span><span style="color: #005c5f;">1</span>, <span style="color: #005c5f;">0</span>, A0, A1, A2, A3, A4, A5<span style="color: #434f54;">}</span>;</div><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> dataInPin = <span style="color: #005c5f;">13</span>;</div><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> clkPin = <span style="color: #005c5f;">11</span>;</div><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> csPin = <span style="color: #005c5f;">12</span>;</div><div><span style="color: #00979d;">const</span> <span style="color: #00979d;">int</span> displayDelay = <span style="color: #005c5f;">500</span>;<span style="color: #95a5a6;"> // Delay antara tampilan angka</span></div><br /><div>LedControl lc = <span style="color:

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#d35400;">LedControl(dataInPin, clkPin,
csPin, 1<span style="color:
#434f54;"></div>
<div>void setup({</div><div> // Set up
switches</div><div> for (int i = 0; i < numSwitches; ++i<span style="color:
#434f54;">{</div><div> <span style="color:
#d35400;">pinMode<span style="color:
#434f54;">(switches[i],
INPUT_PULLUP)</div><div> </div>
<div> //
Initialize the display</div><div> <span style="color:
#d35400;">lc.shutdown<span style="color:
#434f54;">(0, <span style="color:
#005c5f;">false)</div><div> lc.setIntensity(0, 8)</div><div> lc.<span style="color:
#d35400;">clearDisplay(<span style="color:
#005c5f;">0)</div><div><span style="color:
#434f54;">}</div>
<div>void loop({</div><div> // Hitung
jumlah switch yang tertutup</div><div> <span style="color:
#00979d;">int closedSwitches = <span style="color:
#005c5f;">0</div><div> for (int i = 0; i < numSwitches; ++i<span style="color:
#434f54;">{</div><div> <span style="color:
#728e00;">if (digitalRead(switches[i]) ==
LOW) { // Jika switch tertutup</div><div> <span style="color:
#434f54;">}</div><div> }</div>
<div> // Tampilkan angka hanya jika hanya satu
switch yang tertutup</div><div> if
(closedSwitches == <span style="color:
#005c5f;">1) <span style="color:
#434f54;">{</div><div> <span style="color:
#d35400;">displayNumber(5)</div><div>
 delay<span style="color:
#434f54;">(displayDelay)</div><div>

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[illegible]

[illegible]

#728e00;">break</span>;</div><div>&nbsp; <span style="color: #434f54;"></span></div><br /><div>&nbsp; <span style="color: #728e00;">for</span><span style="color: #434f54;">(</span><span style="color: #00979d;">int</span> i = <span style="color: #005c5f;">0</span>; i &lt; <span style="color: #005c5f;">8</span>; ++i<span style="color: #434f54;">)</span> <span style="color: #434f54;">{</span></div><div>&nbsp; &nbsp; <span style="color: #d35400;">lc</span>.<span style="color: #d35400;">setRow</span><span style="color: #434f54;">(</span><span style="color: #005c5f;">0</span>, i, <span style="color: #d35400;">rows</span>[i]<span style="color: #434f54;">)</span></div><div>&nbsp; <span style="color: #434f54;">}</span></div><div><span style="color: #434f54;">}</span></div><br /></div></span></span></div>

<div>  
<span style="font-size: medium;"><span style="font-family: georgia;"><span style="font-weight: bold;">b. Flowchart</span></span></span>  
</span></div><div><span style="font-family: georgia; font-size: medium;"><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEigoHRZHsB8luIXgwI9gurmveoY8eilmYIT-\_bE3y8j3\_KxM031Fc1EsZh0bjkKUqJOhAvgXuLk0WlaOwTLhMRFxH8CmVDqjSaAA-3GBCB-2UIKt3rLKIRBeeqI9eY7JMrVQNaFh2RuolcmXBU8i5gElloyvuLeDws1qFFLSeE8fFUOM1OUVTy7UP2at4/s1320/Blank%20diagram%20(5).jpeg" style="margin-left: 1em; margin-right: 1em;"></a></div><br /><span style="font-weight: bold;"><br /></span></span></div>

<span style="font-size: medium;"><span style="font-family: georgia;"><b><span><span><span>5. Kondisi</span><span style="color: #741b47;"><a name="kondisi"></a></span></span></span>

<a href="#home" style="color: #741b47;">[Kembali]</a></span></span></b></span>

</span></div><div><span style="font-family: georgia; font-size: medium;"><span style="font-size: medium;"><div style="color: #38761d; text-align: left;"><span id="docs-internal-guid-bd00127c-7fff-2705-defd-5d518e176a51"><span style="color: black; font-variant-alternates: normal; font-variant-east-asian: normal; font-variant-numeric: normal; font-variant-position: normal; vertical-align: baseline; white-space-collapse: preserve;"><span>Ketika 1 switch aktif dot matrix akan menampilkan angka 5,7,7</span></span></span></div><div style="font-family: &quot;Times New Roman&quot;; font-weight: bold;"><span><span style="color: black; font-variant-alternates: normal; font-variant-east-asian: normal; font-variant-numeric: normal; font-variant-position: normal; vertical-align: baseline; white-space-collapse: preserve;"><span style="font-family: arial;"><br /></span></span></span></div></span></span></div>

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<span style="font-family: georgia; font-size: medium;"><span style="font-family: georgia; font-size: medium;"><b><span><span><span>6. Video Simulasi</span><span style="color: #741b47;"><a name="video"></a></span></span></span>

[\[Kembali\]](#home)

**7. Download File**

[\[Kembali\]](#home)

**7. Download File**

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- HTML
- Rangkaian
- [klik](https://drive.google.com/uc?export=download&id=1XFeQIWh0NHRsrbN_aYIBCKw2aU0z5-yF)
- Video
- [klik](https://drive.google.com/uc?export=download&id=1d93M4smVJB-fXsd48s13wOIm7VnKk4Z3)
- Arduino
- [klik](https://drive.google.com/uc?export=download&id=1M21yHiha7UczxlunkA3KIsQVfi2Gl2Jt)
- Dot Matrix
- [klik](https://drive.google.com/uc?export=download&id=1vffkpfESph2E2FRSemnVVeq4NOTvq4YQ)
- Dipswitch
- [klik](https://drive.google.com/uc?export=download&id=1lIX57a76QILPYChvaZ0qjJD1RV9qbLB4)
- Ic Max7219
- [klik](https://drive.google.com/uc?export=download&id=1dRaAaSm1zS6g_Pw8-gStpsAKco2kjDEQ)

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sans-serif;">
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font-size: medium;" />
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