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<h1 style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; text-align: center;"><span id="judul" style="font-size: x-large;">TUGAS BESAR<br />APLIKASI GORDEN OTOMATIS</span></h1><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;"><br /></div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;"><a href="https://azhim233001.blogspot.com/" style="color: #ff2828; outline: none; text-decoration-line: none; transition: all 0.14s ease 0s;">[MENU]</a></div><br style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;" /><center style="background-color: white; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"><div style="border: 2px dashed rgb(23, 128, 221); height: 240px; overflow: auto; padding: 10px; width: 330px;"><b style="color: #333333;">DAFTAR ISI</b><br /><div style="color: #333333; text-align: left;"><a href="#tujuan" style="color: #ff2828; outline: none; text-decoration-line: none; transition: all 0.14s ease 0s;">1. Tujuan</a></div><div style="color: #333333; text-align: left;"><a href="#alat" style="color: #ff2828; outline: none; text-decoration-line: none; transition: all 0.14s ease 0s;">2. Alat dan Bahan</a></div><div style="text-align: left;"><span style="color: red;"><a href="#dasar">3. Dasar Teori</a></span></div><div style="text-align: left;"><span style="color: red;"><a href="#percobaan">4. Percobaan</a></span></div><div style="text-align: left;"><span style="color: red;"><a href="#download">5. Download File</a></span></div></div></center><p style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; margin: 0px 0px 10px 0px;">&nbsp;</p><h2 style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; margin: 0px 0px 10px 0px; text-align: left;"><span style="font-size: large;"><span id="tujuan">1. Tujuan&nbsp;</span><a href="#judul">Kembali</a><span style="color: #222222;"></span></span></h2><ul style="background-color: white; color: #222222; font-family: Crushed; font-size: 26.4px; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em; text-align: justify;"><li style="line-height: 20px; margin: 0px 0px 0.25em 0px; padding: 0px;"><span style="font-family: arial; font-size: medium; line-height: 18.4px;">Membuat rangkaian kontrol gorden otomatis menggunakan sensor touch, uv, kelembaban, piezo dan sound sensor</span></li><li style="line-height: 20px; margin: 0px 0px 0.25em 0px; padding: 0px;"><span style="font-family: arial; font-size: medium; line-height: 18.4px;">Mengetahui penggunaan transistor dan op amp pada rangkaian</span></li><li style="line-height: 20px; margin: 0px 0px 0.25em 0px; padding: 0px;"><span style="font-family: arial; font-size: medium; line-height: 18.4px;">Mengetahui kegunaan dan fungsi dari sensor touch, uv, kelembaban, piezo dan sound sensor</span></li></ul><p style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; margin: 0px 0px 10px 0px;"><br /></p><h2 style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; margin: 0px 0px 10px 0px; text-align: left;"><span id="alat" style="font-size: large;">2. Alat Dan Bahan&nbsp;</span><a href="#judul" style="font-size: x-large;">Kembali</a><span style="color: #222222; font-size: x-large;"></span></h2><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"><span style="font-size: large;"><span face="Arial, Tahoma, Helvetica, FreeSans, sans-serif"><span style="font-family: arial;"><b>ALAT</b></span></span></span></div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"><br /></div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"><span face="Arial, Tahoma, Helvetica, FreeSans, sans-serif"><div style="font-family: arial; font-size: x-large;"><span style="font-size: large;"><span style="color:

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#424242;">Instrument</div><div style="font-family: arial; font-size: x-large;">
</div><div>1) DC Voltmeter</div><div><div class="separator" style="clear: both; text-align: justify;"><div style="color: black; text-align: left;"><div class="separator" style="clear: both; text-align: justify;">DC Voltmeter merupakan alat yang digunakan untuk mengukur besar tegangan pada suatu komponen. Cara pemakaiannya adalah dengan memparalelkan kaki2 Voltmeter dengan komponen yang akan diuji tegangannya.</div><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both;">Berikut adalah Spesifikasi dan keterangan Probe DC Volemeter</div><div class="separator" style="clear: both;"><div class="separator" style="clear: both; text-align: center;">
</div>
</div>
<div class="separator" style="clear: both; font-family: arial; font-size: x-large; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEglhU5jSaJuzl7G0aPFuiLcOpMoYLM6B7bO1hZ5R0lwG0Gbar_RfG2nk06YhpoWjIETQMOaVl1PDvEzW_vhgoS9F6xFeGXCyTEKkbqwwl_Bd8OMcnWByzX1m7OFNSTw7dJpJdDvoMYpnOa-eFNpJNXOGrg2MPHFLPFSfQMmAzy7-lA4c0u2nuAL

[illegible]

[illegible]

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/></div><div class="separator" style="clear: both; text-align: justify;">Berfungsi sebagai sumber daya bagi sensor ataupun rangkaian. Spesifikasi</div><div class="separator" style="clear: both; text-align: justify;"><span

style="font-family: times;">Input voltage: 5V-12V<br style="box-sizing: inherit; color: rgba(0, 0, 0, 0.87); text-align: start;" />Output voltage: 5V<br style="box-sizing: inherit; color: rgba(0, 0, 0, 0.87); text-align: start;" /><span color="rgba(0, 0, 0, 0.87)"

style="text-align: start;">Output Current: MAX 3A<br style="box-sizing: inherit; color: rgba(0, 0, 0, 0.87); text-align: start;" />Output power:15W<br style="box-sizing: inherit; color: rgba(0, 0, 0, 0.87); text-align: start;" />conversion efficiency:

96%</div></div><div><div class="separator" style="clear: both; text-align: justify;">
</div><div class="separator" style="clear: both; text-align: justify;">BAHAN</div></div><div><div

class="separator" style="clear: both; text-align: center;">
</div></div></div><div style="background-color: white; color: #333333;

font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"><div>1) Resistor</div><div><span

style="color: #424242;"><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEgiy6i9pj9GcQhIafhhPUGZVId

xKeUGbAzt2AstOWDOmxYb-iN4lIMXeuN0vPDkRLNugBF8oJ6hbV7bjvmE61j6clgKRzYHkiIDvsvqZD_9J3sXLlceKEcoIMhjPVUB7mTPH6unpBCPq1vdaG7aBRcQzCF-GoQHbTjA6YAvH1baiJ0127CLX1OzMMB/s640/WhatsApp%20Image%202022-07-05%20at%2023.48.04.jpeg" style="color: #cd2b25; margin-left: 1em; margin-right: 1em; outline: none; text-decoration-line: none; transition: all 0.14s ease

0s;"></div><div>Resistor adalah komponen Elektronika Pasif yang memiliki nilai resistansi atau hambatan tertentu yang berfungsi untuk membatasi dan mengatur arus listrik dalam suatu rangkaian Elektronika ($V=I R$). </div><div>
</div><div><div style="color: black;"><div>Cara menghitung nilai resistor:</div><div style="text-align: center;">Tabel

warna</div></div><div style="color: black; font-family: "Comic Sans MS";"><div style="text-align: justify;"><div class="separator" style="clear: both; font-family: times; font-size:

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href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEjoHZTwVmA7WVjr0j2uMofHvJRE-Vm1sjOw8zw6GIHfb3LVVhTd25tE7pCsuCdK8qkl-ByVykcO8PcSQ8bMmv6QlHkW6mOgGmAHgNYu5Jm4fWyeDIS6lbgU5SIbMTmVkGkmCkcPny63NkMKJ9TcZ6_TZj-FvGCNay8UC_sPT1LRhAfU92t0vaqDYmZ4/s600/WhatsApp%20Image%202022-07-04%20at%2009.10.18.jpeg" style="color: #cd2b25; margin-left: 1em; margin-right: 1em; outline: none; text-decoration-line: none; transition: all 0.14s ease 0s;"><img border="0" data-original-height="432" data-original-width="600" height="230"

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max-width: 100%; padding: 5px; position: relative; vertical-align: middle;" width="320"
```

:</div><div class="separator" style="clear: both; font-family: times; font-size: large; text-align:

dibelakang angka gelang ke-2; atau kalikan 105</div><div class="separator" style="clear: both;

10%.</div><div class="separator" style="clear: both; font-family: times; font-size: large; text-align:

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style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; border: 1px solid rgb(241, 241, 241); box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; height: auto; max-width: 100%; padding: 5px; vertical-align: middle;" width="400" /></div></div></div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;">
</div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;">2) Dioda</div><div class="separator" style="background-color: white; clear: both; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;"></div><div class="separator" style="background-color: white; clear: both; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;">
</div><div class="separator" style="background-color: white; clear: both; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;">Spesifikasi</div><div class="separator" style="background-color: white; clear: both; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: center;"><div class="separator" style="clear: both;"></div>
</div><div style="background-color: white; color: #333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px; text-align: justify;">Untuk menghantarkan arus listrik ke satu arah tetapi menghambat arus listrik dari arah sebaliknya. Oleh karena itu, Dioda sering dipergunakan sebagai penyearah dalam Rangkaian Elektronika. Dioda pada umumnya mempunyai 2 Elektroda (terminal) yaitu Anoda (+) dan Katoda (-) dan memiliki prinsip kerja yang berdasarkan teknologi pertemuan p-n semikonduktor yaitu dapat mengalirkan arus dari sisi tipe-p (Anoda) menuju ke sisi tipe-n (Katoda) tetapi tidak dapat mengalirkan arus ke arah sebaliknya.</div><div style="background-color: white; color:

#333333; font-family: Quattrocento, Arial, Helvetica, sans-serif; font-size: 14px;"></div></div><div>
</div><div>3)</div><div><div class="MsoListParagraphCxSpFirst" style="font-size: x-large; text-align: justify; text-indent: -18pt;"><div class="separator" style="clear: both; text-align: center;"></div></div><div style="text-align: justify;">Merupakan transistor tipe NPN yang digunakan untuk switching agar mengaktifkan kontak relay dan relay tersebut akan memberikan kontak pada motor DC dan output lainnya.</div>Spesifikasi
<ul style="line-height: 1.4; list-style-image: initial; list-style-position: initial; margin: 0.5em 0px; padding: 0px 2.5em;"><ul style="line-height: 1.4; list-style: disc; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="border: none; line-height: 20px; margin: 0px 0px 0.25em; padding: 0px;">Bi-Polar TransistorDC Current Gain (hFE) is 800 maximumContinuous Collector current (IC) is 100mAEmitter Base Voltage (VBE) is > 0.6VBase Current (IB) is 5mA maximum<div style="font-family: arial; font-size: x-large;">
</div><div>4) Op Amp - LM741</div><div><div>Op-Amp adalah salah satu dari bentuk IC Linear yang berfungsi sebagai Penguat Sinyal listrik. Sebuah Op-Amp terdiri dari beberapa Transistor, Dioda, Resistor dan Kapasitor yang terinterkoneksi dan terintegrasi sehingga memungkinkannya untuk menghasilkan Gain (penguatan) yang tinggi pada rentang frekuensi yang luas. Dalam bahasa Indonesia, Op-Amp atau Operational Amplifier sering disebut juga dengan Penguat Operasional.</div><p class="MsoNormal" style="color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; margin: 0px 0px 10px 0.5in;"></p><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;

text-align: center;"> </div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;">Konfigurasi PIN LM741</div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;">
</div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;">
</div><div class="separator" style="clear: both; text-align: center;"><a
Spesifikasi:</div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;">
</div></div><div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;">Komponen Input</div><div class="separator" style="clear: both; color: #424242; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;">
</div><div class="separator" style="clear: both; color: #424242;"><div class="separator" style="clear: both;">1)
Switch atau Button</div><div class="separator" style="clear: both;">Switch adalah suatu komponen jaringan komputer yang berfungsi untuk menghubungkan beberapa perangkat untuk
meneruskan data ke perangkat yang dituju.</div><div class="separator" style="clear: both;"><div class="separator" style="clear: both; text-align: center;">
</div><div class="separator" style="clear: both;">Pinout</div><div class="separator" style="clear: both;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEjDO5IWX6GVnxFi5v53PhLZNLf

1UwaQfybEnvALNKtKnME0VTwNMNf-rG2I1EVmaYXVX0Qem3NnmUAYokyaxrOLiu1tCaeM_ETQwr6t8q0H-qxnbfhM5peTjIXsz1UPUBpkmmYAJSo_K-vAciFzKfompAJmknOcQV7oBTqqaNdI0OmEV_MuxC0wEGdd/s426/WhatsApp%20Image%202022-07-06%20at%2007.08.27%20(1).jpeg" style="clear: left; color: #cd2b25; margin-bottom: 1em; margin-right: 1em; outline: none; text-align: center; text-decoration-line: none; transition: all 0.14s ease 0s;"></div><div class="separator" style="clear: both;">Spesifikasi:</div><div class="separator" style="clear: both; text-align: center;">a

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</div></div></div></div><div class="separator" style="clear: both;"><div><b style="color: #424242;">2) Sensor Touch</div><div><p class="MsoNormal" style="color: #424242; margin: 0px 0px 10px; text-align: justify;">Merupakan sensor yang mendeteksi sentuhan. Sensor Sentuh ini pada dasarnya beroperasi sebagai sakelar apabila disentuh, seperti sakelar pada lampu, layar sentuh ponsel dan lain sebagainya. Sensor Sentuh ini dikenal juga sebagai Sensor Taktil.</p></div><div><div class="separator" style="clear: both; text-align: center;"></div><div class="separator" style="clear: both; text-align: center;"><div style="text-align: justify;"><span face="Arial, Tahoma, Helvetica,

FreeSans, sans-serif" style="color: #222222;">Pin Out</div><div style="text-align: justify;"><div class="separator" style="clear: both; text-align: center;"></div></div><div style="text-align: justify;">Spesifikasi</div><div style="text-align: justify;"><div class="separator" style="clear: both; text-align: center;"></div></div><div style="text-align: justify;">Grafik Respon Sensor Touch</div><div class="separator" style="clear: both;"> Dimensions: 45 x 17 x 9 mm<li style="box-sizing: border-box; line-height: 1.4; margin: 0px 0px 0.25em; padding: 0px;"> Signal output indication<li style="box-sizing: border-box; line-height: 1.4; margin: 0px 0px 0.25em; padding: 0px;"> Single channel signal output<li style="box-sizing: border-box; line-height: 1.4; margin: 0px 0px 0.25em; padding: 0px;"> With the retaining bolt hole, convenient installation<li style="box-sizing: border-box; line-height: 1.4; margin: 0px 0px 0.25em; padding: 0px;"> Outputs low level and the signal light when there is sound</div><div class="separator" style="clear: both; color: #424242;">Grafik Respons Sensor Sound</div><div class="separator" style="clear: both; color: #424242;"></div>
<p style="color: #424242; margin: 0px 0px 10px;"></p><p class="MsoNormal" style="color: #424242; margin: 0px 0px 10px;">4) Sensor Ultraviolet (APDS – 9002)</p><p class="MsoNormal" style="color: #424242; margin: 0px 0px 10px;">Sensor yang mendeteksi adanya cahaya terang dan gelap.</p><p class="MsoNormal" style="color: #424242; margin: 0px 0px 10px;"></p><div class="separator" style="clear: both; color: #424242; text-align: center;"></div><div class="separator" style="clear: both; color: #424242; text-align: justify;">Pinout</div><div class="separator" style="clear: both; text-align: center;">

src="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEh9GGOpZA0Sif85hO3nGbqgSES5Qx__042hZalkPgWtZRtFD0m3J6SLfQTH0Q2JBnGufxfIVkldulhFrZtyWqfivu_8aSiSMAzT8qsax8x4eh5h50LedH3iXfhAwNEdUWPMXrisJ-JtoGAeSQKjnNw4nIk_w_bvpkPnBYO6QVON8Eic9RRZXB7r6bYz/w188-h400/WhatsApp%20Image%202022-07-06%20at%2000.22.48.jpeg" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; border: 1px solid rgb(241, 241, 241); box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; height: auto; max-width: 100%; padding: 5px; position: relative; vertical-align: middle;" width="188" /></div><div class="separator" style="clear: both; color: #424242; text-align: justify;">Spesifikasi</div><div class="separator" style="clear: both; text-align: center;"><a