

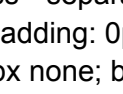
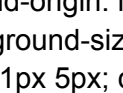
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/></span></h3><h3 style="text-align: center;"><span style="font-weight: normal;">Modul 4:
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an style="color: black; font-family: times;">[KEMBALI KE MENU
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<span style="font-family: times;"><b>DAFTAR ISI</b>
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Bahan</span></a></div>
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Simulasi</span></a></div>
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Analisis</span></a></div>
</span></div>
<div style="text-align: left;">
<a href="#download"><span style="color: black; font-family: times;">7.
Download</span></a></div>
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<div><a><br /></a></div><p><span style="font-family: georgia; font-size:
medium;"><b><span style="color: #990000;">1. Jurnal</span></b><a
name="jurnal"></a><a href="#home"><b>[Kembali]</b></a></span></p><div
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k217wzhO4kjLDGbjuk" style="margin-left: 1em; margin-right: 1em;"></a></div><div class="separator" style="clear: both; text-align: justify;"><span style="font-family: times;"><span style="color: #222222;">Flip-flop adalah rangkaian elektronika yang memiliki dua kondisi stabil dan dapat digunakan untuk menyimpan informasi.&nbsp;</span><span style="color: #333333;">Kelebihan JK Flip-flop adalah tidak adanya kondisi terlarang atau yang berarti di beri berapapun inputan asalkan terdapat clock maka akan terjadi perubahan pada keluarannya / outputnya. berikut adalah symbol dan tabel kebenaran dari JK Flip-Flop.</span></span></div><div class="separator" style="clear: both; text-align: justify;"><span style="font-family: times;"><span style="color: #333333;"><br /></span></span></div><div class="separator" style="clear: both; text-align: justify;"><span style="font-family: times;"><table align="center" cellpadding="0" cellspacing="0" class="tr-caption-container" 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; color: #222222; margin-bottom: 0.5em; margin-left: auto; margin-right: auto; padding: 5px; position: relative;"><tbody><tr><td style="text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEgE7ntTHzBTGrEMDSBnUgoEc9P5skRypaRlZqAfQ0iWBk0HxbMMZs12CvpPwOZH81uPL68A0JemgOKgqI8NM93sgBFQBgTs1fq-fjO8\_WSE7f6g8ghgS61TKmFe6edfomBYjPLwaB\_N9aeV9J2mnFrHWLk909CJhgLLGZ3uD2vt5xoDiMVORGCvNK1w/s979/Tabel%20Kebenaran%20JK%20Flip%20Flop.png" style="color: #2667cf; margin-left: auto; margin-right: auto; text-decoration-line: none;"></a></td></tr></tbody></table><br /><span style="color: #333333;"><br /></span></span></div><br /></div><span face="Arial, Tahoma, Helvetica, FreeSans, sans-serif" style="font-size: 14.85px;"><div style="font-weight: bold;"><div style="color: #333333; font-family: trebuchet; font-weight: 400;">&nbsp;<span face="Arial, Tahoma, Helvetica, FreeSans, sans-serif">&nbsp;</span><span style="font-family: times;">Power DC</span></div></div></span></div><div class="separator" style="clear: both;"><div class="separator" style="clear: both;"><div class="separator" style="border: 0px none; box-sizing: border-box; clear: both; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px; margin: 0px; padding: 0px; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEiifCpql-hK4HMFsTtWx-k63-IZKbRxgl5nzCc7JeiAaIMiPGMBKUN\_FYR-WP1ziACvUliQsf8WaWfFO0ZPI5mtkodnnow-Dg8joTApnKVGjYpwl3OR5FT1pmPMf3rBeiZxVy1qVEbmQGQg\_1R3Jfc2FHjrwFwjN7I\_UmWBGifWrwlKEJHTuU5wHwSn/s192/image\_2022-03-23\_125741.png" style="border: 0px none; box-sizing: border-box; color: #b51200; margin: 0px 1em; padding: 0px; text-decoration-line: none; transition: 0.3s;"><span style="color: black; font-family: times; font-size: small;"></span></a></div><div class="separator" style="border: 0px none; box-sizing:  
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sans-serif; font-size: 16.5px; margin: 0px; padding: 0px;"><span style="font-family:  
times;">&nbsp; &nbsp; &nbsp; 3.&nbsp;Switch (SW-SPDT)</span></div><div class="separator"  
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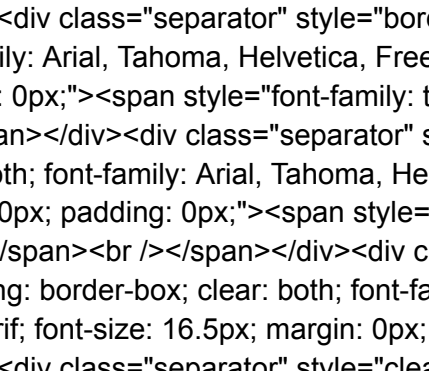
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Helvetica, FreeSans, sans-serif; font-size: 16.5px; margin: 0px; padding: 0px;"><span  
style="font-family: times;">&nbsp; &nbsp; &nbsp; 5.&nbsp;Gerbang AND</span></div><div  
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Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px; margin: 0px; padding:  
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lebih input ada yang bernilai nol maka output akan bernilai nol. Untuk gerbang AND memakai prinsip perkalian

|                                                                                                                                                                                                           |                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center; margin: 0;">Tabel 1.1</p> <p style="text-align: center; margin: 0;">Tabel Kebenaran AND</p> </div> | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">  </div> |
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center; margin: 0;">Gerbang Not</p> </div>                                                                 | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">  </div> |

Gerbang Not



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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: medium none; box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; box-sizing: border-box; margin: 0px; max-width: 100%; padding: 0px; position: relative;" width="185" /></span></a></div><div class="separator" style="border: 0px none; box-sizing: border-box; clear: both; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px; margin: 0px; padding: 0px; text-align: center;"><span style="font-family: times;">Gambar 7. Logic Probe</span></div></div></div></div></div><div class="separator" style="background-color: white; clear: both; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 16.5px;"><div class="separator" style="border: 0px none; box-sizing: border-box; clear: both; color: #444444; margin: 0px; padding: 0px; text-align: center;"><br /></div></div><div class="separator" style="border: 0px none; box-sizing: border-box; clear: both; margin: 0px; padding: 0px;"><div class="separator" style="border: 0px; box-sizing: border-box; clear: both; font-size: 16.5px; margin: 0px; padding: 0px; text-align: center;"><br /><br /></div><div class="separator" style="border: 0px none; box-sizing: border-box; clear: both; font-size: 16.5px; margin: 0px; padding: 0px; text-align: center;"><span style="font-family: times;"><br /></span></div></div></div><div class="separator" style="clear: both; text-align: left;"><div class="separator" style="clear: both;"><b><span style="color: #990000; font-family: georgia; font-size: medium;">3. Rangkaian Simulasi<a name="rangkaian"></a><a href="#home">[Kembali]</a></span></b></div><div class="separator" style="clear: both; text-align: center;"><b><span style="color: #990000; font-family: georgia; font-size: medium;">&nbsp;</span></b></div><div class="separator" style="clear: both; text-align: center;"><b><span style="color: #990000; font-family: georgia; font-size: medium;"></span></b></div><div class="separator" style="clear: both; text-align: center;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEiZO97OKgKxrJNYOCUJeBzwepadiHMAo1HbJSNyeR1yl8ti5QNteAkYYEUKzKNma3T2Q9zf4isEt5Y7Cvbi3JKO8rWBUGEEvTBGGMZInuDZvs\_XYck8RJF-STRab7bvEn0F2gu5xkKah2l-GVsesiRxvHqzYfD1522AvDUU4VY9MKI9Lq2ZVgrPn6rZ7Tg/s2541/IMG-20241121-WA0006%5B1%5D.jpg" style="margin-left: 1em; margin-right: 1em;"></a></div></div><div class="separator" style="clear: both; text-align: left;"><b><span style="color: #990000; font-family: georgia; font-size: medium;">&nbsp;</span></b></div><div class="separator" style="clear: both; text-align: left;"><b><span style="color: #990000; font-family: georgia; font-size: medium;">4. Prinsip Kerja<a name="prinsip"></a><a href="#home">[Kembali]</a></span></b></div><div class="separator" style="clear: both; text-align: left;"><div style="background-color: white; font-family: times, &quot;times new roman&quot;, serif; font-weight: bold;"><div style="color:

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Kondisi 3

pada konsidi ini diberikan ketentuan nilai pada B3-B6 = X, B1 = 0, B0 & B2 = 1. kondisi ini saat -rangkaian dijalankan adalah type shift register PISO (parallel in-serial out), dimana LED masuk secara bersamaan semuanya dalam satu waktu dan untuk outputnya keluar secara satu-persatu dari kanan ke kiri modul, itu dengan kita memainkan sw pada B3-B6, jadi akan keluar LED secara satu-persatu.

Kondisi 4

diberikan kondisi B3-B6 = X, B0 = 1, B1 & B2 = 0, dimana saat rangkaian dijalankan ini adalah termasuk type shift register PIPO (parallel in-parallel out), dimana saat kita memainkan B3-B6 akan nampak hasil LED masuk semuanya secara bersamaan dalam clock dan outputnya pun keluar secara bersamaan semuanya secara parallel.

2. Analisalah pengaruh gerbang AND pada rangkaian. Jika inputan clock langsung dihubungkan ke flip flop dan tidak menggunakan gerbang AND, kira-kira bagaimana outputnya? Apakah sama? Analisalah hal tersebut!

Jawab :

Jika tidak menggunakan gerbang AND atau clock langsung dihubungkan ke flip-flop, input yang diberikan akan tetap berubah-ubah tergantung clock. Namun, jika tanpa gerbang AND maka output yang dihasilkan akan sulit untuk ditentukan sifatnya, apakah serial out atau paralel out. Hal ini disebabkan karena jika gerbang AND dihapus, maka clocknya akan berubah-ubah dengan sangat cepat, sehingga outputnya akan terlihat tetap. Gerbang AND berpengaruh pada output yang dihasilkan. Apabila gerbang AND diberi inputan 0, maka pada clock akan menghasilkan output berupa paralel out karena outputnya hanya 0 saja. Tetapi apabila gerbang AND diberi inputan 1, maka output yang dihasilkan berupa serial out, karena kemungkinan outputnya berubah-ubah bisa 1 ke 0 atau 0 ke 1. Jadi, gerbang AND berfungsi menentukan sifat dari outputnya sehingga data yang dihasilkan akurat.

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