DLD Lab #8

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Table of Contents

[**Exercise #1** 2](#_Toc100819964)

[**Exercise #2** 3](#_Toc100819965)

[**Exercise #3** 4](#_Toc100819966)

# **Exercise #1**



**One-Bit Comparator**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** | **B** | **A>B** | **A=B** | **A<B** |
| 0 | 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |

# **Exercise #2**

|  |  |  |
| --- | --- | --- |
| **B**  **A** | **0** | **1** |
| **0** | 0 | 1 |
| **1** | 0 | 0 |

**A’B**

|  |  |  |
| --- | --- | --- |
| **B**  **A** | **0** | **1** |
| **0** | 0 | 0 |
| **1** | 1 | 0 |

**AB’**

|  |  |  |
| --- | --- | --- |
| **B**  **A** | **0** | **1** |
| **0** | 1 | 0 |
| **1** | 0 | 1 |

**A’B’ + AB**

# **Exercise #3**



|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **A1** | **A0** | **B1** | **B0** | **A<B** | **A=B** | **A>B** |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 0 |

