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**COS10004 - Computer Systems – Lab 1 Submission**

**Screenshot of circuit 1**

A picture containing chart

Description automatically generated

*Screen captured from my Mac on September 15th, 2022*

**Testing circuit**

|  |  |  |
| --- | --- | --- |
| **Pin 1** | **Pin 2** | **Output** |
| 1 | 1 | 1 |
| 1 | 0 | 0 |
| 0 | 1 | 0 |
| 0 | 0 | 0 |

*Table 1. Truth table for the circuit 1*

**Screenshot of circuit 2**

Chart

Description automatically generated with medium confidence

*Screen captured from my Mac on September 15th, 2022*

**Testing circuit**

|  |  |
| --- | --- |
| **Pin** | **Output** |
| 1 | 0 |
| 0 | 1 |

*Table 2. Truth table for the circuit 2*

**Screenshot of circuit 3**

**A picture containing chart

Description automatically generated**

*Screen captured from my Mac on September 15th, 2022*

**Testing circuit**

|  |  |  |
| --- | --- | --- |
| **Pin 1** | **Pin 2** | **Output** |
| 1 | 1 | 0 |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 0 | 0 | 1 |

*Table 3. Truth table for the circuit 3*

**Screenshot of half-adder circuit**

**Diagram

Description automatically generated with low confidence**

*Screen captured from my Mac on September 15th, 2022*

**Testing circuit**

|  |  |  |  |
| --- | --- | --- | --- |
| **Input 1** | **Input 2** | **Sum Output** | **Carry Output** |
| 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 |

*Table 4. Truth table for the half-adder circuit*

**Screenshot of full-adder circuit**

Diagram

Description automatically generated

*Screen captured from my Mac on September 15th, 2022*

**Testing circuit**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input 1** | **Input 2** | **Carry in** | **Sum output** | **Carry Output** |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |