**APNP - Semana 5 - Lista OAC - Layla Couto**

**C1)** S = D + AB' + A'C' + BC

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 1 |
| 2 | 0 0 1 0 | 0 |
| 3 | 0 0 1 1 | 1 |
| 4 | 0 1 0 0 | 1 |
| 5 | 0 1 0 1 | 1 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 1 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 1 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 1 |
| 12 | 1 1 0 0 | 0 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 1 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C2)** S = B'D' + ABC' + A'B'C + ABD + AC'D + A'CD' + BC'D

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 1 |
| 3 | 0 0 1 1 | 1 |
| 4 | 0 1 0 0 | 0 |
| 5 | 0 1 0 1 | 1 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 0 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 0 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 0 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 0 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C3)** S = B'D' + AC'D' + A'CD'

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 1 |
| 3 | 0 0 1 1 | 0 |
| 4 | 0 1 0 0 | 0 |
| 5 | 0 1 0 1 | 0 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 0 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 0 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 0 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 0 |
| 14 | 1 1 1 0 | 0 |
| 15 | 1 1 1 1 | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C4)** S = AB + BC' + BD' + AC' + A'B'C

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 0 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 1 |
| 3 | 0 0 1 1 | 1 |
| 4 | 0 1 0 0 | 1 |
| 5 | 0 1 0 1 | 1 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 0 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 1 |
| 10 | 1 0 1 0 | 0 |
| 11 | 1 0 1 1 | 0 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 1 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C5)** S = A'B + BC + AB'C' + A'C'D' + ACD'

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 0 |
| 3 | 0 0 1 1 | 0 |
| 4 | 0 1 0 0 | 1 |
| 5 | 0 1 0 1 | 1 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 1 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 1 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 0 |
| 12 | 1 1 0 0 | 0 |
| 13 | 1 1 0 1 | 0 |
| 14 | 1 1 1 0 | 1 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C6)** S = BD + AC' + A'C + B'D'

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 1 |
| 3 | 0 0 1 1 | 1 |
| 4 | 0 1 0 0 | 0 |
| 5 | 0 1 0 1 | 1 |
| 6 | 0 1 1 0 | 1 |
| 7 | 0 1 1 1 | 1 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 1 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 0 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 0 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C7)** S = B' + AC' + AD' + C'D' + A'CD

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 1 |
| 1 | 0 0 0 1 | 1 |
| 2 | 0 0 1 0 | 1 |
| 3 | 0 0 1 1 | 1 |
| 4 | 0 1 0 0 | 1 |
| 5 | 0 1 0 1 | 0 |
| 6 | 0 1 1 0 | 0 |
| 7 | 0 1 1 1 | 1 |
| 8 | 1 0 0 0 | 1 |
| 9 | 1 0 0 1 | 1 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 1 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 1 |
| 15 | 1 1 1 1 | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |

**C8)** S = AB + AC

|  |  |  |
| --- | --- | --- |
| **Situação** | **A B C D** | **S** |
| 0 | 0 0 0 0 | 0 |
| 1 | 0 0 0 1 | 0 |
| 2 | 0 0 1 0 | 0 |
| 3 | 0 0 1 1 | 0 |
| 4 | 0 1 0 0 | 0 |
| 5 | 0 1 0 1 | 0 |
| 6 | 0 1 1 0 | 0 |
| 7 | 0 1 1 1 | 0 |
| 8 | 1 0 0 0 | 0 |
| 9 | 1 0 0 1 | 0 |
| 10 | 1 0 1 0 | 1 |
| 11 | 1 0 1 1 | 1 |
| 12 | 1 1 0 0 | 1 |
| 13 | 1 1 0 1 | 1 |
| 14 | 1 1 1 0 | 1 |
| 15 | 1 1 1 1 | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | C’ | | C | |  |
| A’ |  |  |  |  | B’ |
|  |  |  |  | B |
| A |  |  |  |  |
|  |  |  |  |  |
|  | D’ | D | | D’ |  |