## Πίνακας Καταστάσεων

|  |  |  |  |
| --- | --- | --- | --- |
| Παρούσα κατάσταση | Επόμενη κατάσταση για x=1 | Επόμενη κατάσταση για x=0 | Έξοδος Ζ |
| A | B | A | 0 |
| B | B | C | 0 |
| C | D | E | 0 |
| D | B | F | 0 |
| E | G | A | 0 |
| F | D | E | 1 |
| G | B | C | 1 |

## Πίνακας Μεταβάσεων

|  |  |  |  |
| --- | --- | --- | --- |
| X | Q2 Q1 Q0 | Q2+ Q1+ Q0+ | Z |
| 0 | 1. 0 0 0 | (A) 0 0 0 | 0 |
| 0 | 1. 0 0 1 | (C) 0 1 0 | 0 |
| 0 | (C) 0 1 0 | (E) 1 0 0 | 0 |
| 0 | (D) 0 1 1 | (F) 1 0 1 | 0 |
| 0 | (E) 1 0 0 | (A) 0 0 0 | 0 |
| 0 | (F) 1 0 1 | (E) 1 0 0 | 1 |
| 0 | (G) 1 1 0 | (C) 0 1 0 | 1 |
| 0 | (H) 1 1 1 | X X X | X |
| 1 | (A) 0 0 0 | (B) 0 0 1 | 0 |
| 1 | (B) 0 0 1 | (B) 0 0 1 | 0 |
| 1 | (C) 0 1 0 | (D) 0 1 1 | 0 |
| 1 | (D) 0 1 1 | (B) 0 0 1 | 0 |
| 1 | (E) 1 0 0 | (G) 1 1 0 | 0 |
| 1 | (F) 1 0 1 | (D) 0 1 1 | 1 |
| 1 | (G) 1 1 0 | (B) 0 0 1 | 1 |
| 1 | (H) 1 1 1 | X X X | X |

## Πίνακας Διεγέρσεων

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X | Q2 Q1 Q0 | Q2+ Q1+ Q0+ | D2 D1 D0 | Z |
| 0 | (A) 0 0 0 | (A) 0 0 0 | 0 0 0 | 0 |
| 0 | (B) 0 0 1 | (C) 0 1 0 | 0 1 0 | 0 |
| 0 | (C) 0 1 0 | (E) 1 0 0 | 1 0 0 | 0 |
| 0 | (D) 0 1 1 | (F) 1 0 1 | 1 0 1 | 0 |
| 0 | (E) 1 0 0 | (A) 0 0 0 | 0 0 0 | 0 |
| 0 | (F) 1 0 1 | (E) 1 0 0 | 1 0 0 | 1 |
| 0 | (G) 1 1 0 | (C) 0 1 0 | 0 1 0 | 1 |
| 0 | (H) 1 1 1 | X X X | X X X | X |
| 1 | (A) 0 0 0 | (B) 0 0 1 | 0 0 1 | 0 |
| 1 | (B) 0 0 1 | (B) 0 0 1 | 0 0 1 | 0 |
| 1 | (C) 0 1 0 | (D) 0 1 1 | 0 1 1 | 0 |
| 1 | (D) 0 1 1 | (B) 0 0 1 | 0 0 1 | 0 |
| 1 | (E) 1 0 0 | (G) 1 1 0 | 1 1 0 | 0 |
| 1 | (F) 1 0 1 | (D) 0 1 1 | 0 1 1 | 1 |
| 1 | (G) 1 1 0 | (B) 0 0 1 | 0 0 1 | 1 |
| 1 | (H) 1 1 1 | X X X | X X X | X |

## Πίνακες KARNAUGHT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| XQ2\Q1Q0 | 00 | 01 | 11 | 10 |
| 00 | 0 | 0 | 1 | 1 |
| 01 | 0 | 1 | X | 0 |
| 11 | 1 | 0 | X | 0 |
| 10 | 0 | 0 | 0 | 0 |

D2 ->

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| XQ2\Q1Q0 | 00 | 01 | 11 | 10 |
| 00 | 0 | 1 | 0 | 0 |
| 01 | 0 | 0 | X | 1 |
| 11 | 1 | 1 | X | 0 |
| 10 | 0 | 0 | 0 | 1 |

D1 ->

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| XQ2\Q1Q0 | 00 | 01 | 11 | 10 |
| 00 | 0 | 0 | 1 | 0 |
| 01 | 0 | 0 | X | 0 |
| 11 | 0 | 1 | X | 1 |
| 10 | 1 | 1 | 1 | 1 |

D0 ->

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| XQ2\Q1Q0 | 00 | 01 | 11 | 10 |
| 00 | 0 | 0 | 0 | 0 |
| 01 | 0 | 1 | X | 1 |
| 11 | 0 | 1 | X | 1 |
| 10 | 0 | 0 | 0 | 0 |

Z ->

## Απλοποιημένες συναρτήσεις

D2 = X’\*Q2’\*Q1 + X’\*Q2\*Q0 + X\*Q2\*Q1’\*Q0’

D1 = X\*Q2\*Q1’ + X’\*Q2’\*Q1’\*Q0 + X’\*Q2\*Q1 + X\*Q2’\*Q1\*Q0’

D0 = X\*Q2’ + Q1\*Q0 + X\*Q0 + X\*Q1

Z = Q2\*Q0 + Q2\*Q1