Đây là bài thực hành LAB01 ứng với bài thực hành trong file thực hành môn TKLLS.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Current State | | | Next State = OUTPUT | | | INPUT | | |
| Q2 | Q1 | Q0 | Q2+ | Q1+ | Q0+ | T2 | T1 | T0 |
| 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q1 Q0  Q2 | 00 | 01 | 11 | 10 |
| 0 | 1 | 1 |  | 1 |
| 1 |  | 1 | 1 |  |

T2 = Q2’Q0’ + Q1’Q0 + Q2Q0

= (Q2 xor Q0)’ + Q1’Q0

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q1 Q0  Q2 | 00 | 01 | 11 | 10 |
| 0 | 1 | 1 | 1 |  |
| 1 | 1 | 1 |  | 1 |

T1 = Q1’ + Q2’Q0 + Q2Q0’

= Q1’ + (Q2 xor Q0)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q1 Q0  Q2 | 00 | 01 | 11 | 10 |
| 0 |  | 1 | 1 | 1 |
| 1 | 1 | 1 |  |  |

T0 = Q1’Q0 + Q2Q1’ + Q2’Q1

= Q1’Q0 + (Q2 xor Q1)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Load | Q | Enable | Q+ | Pre | Clr |
| 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q1 Q0  Q2 | 00 | 01 | 11 | 10 |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Q1 Q0  Q2 | 00 | 01 | 11 | 10 |
| 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |

Pre = Enable’ + Load’ Clr = Enable’ + Load



