**Aszinkron sorrendi hálózat tervezése**

**Név:**

**Neptun kód:**

**Feladat:**

**Állapotgráf:**

**Előzetes állapottábla:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x1x2  q1q2 | 00 | 01 | 11 | 10 | Z |
| a |  |  |  |  |  |
| b |  |  |  |  |  |
| c |  |  |  |  |  |
| d |  |  |  |  |  |

**Stabil állapotok meghatározása:**

Stabil állapotok azok az állapotok, ahol nincs állapotváltozás.

**Állapot összevonás lépcsős tábla segítségével:**

|  |  |  |  |
| --- | --- | --- | --- |
| b |  |  |  |
| c |  |  |  |
| d |  |  |  |
|  | a | b | c |

|  |  |  |  |
| --- | --- | --- | --- |
| b |  |  |  |
| c |  |  |  |
| d |  |  |  |
|  | a | b | c |

**Összevont állapottábla:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| x1x2  q1q2 | 00 | 01 | 11 | 10 | Z |
| a |  |  |  |  |  |
| b |  |  |  |  |  |
| c |  |  |  |  |  |
| d |  |  |  |  |  |

**Kódválasztás:**

**Kódolt állapottábla:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | x1x2  q1q2 | 00 | 01 | 11 | 10 | Z |
| a |  |  |  |  |  |  |
| b |  |  |  |  |  |  |
| c |  |  |  |  |  |  |
| d |  |  |  |  |  |  |

**Versenyhelyzetek megvizsgálása:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | x1x2  q1q2 | 00 | 01 | 11 | 10 | Z |
| a |  |  |  |  |  |  |
| b |  |  |  |  |  |  |
| c |  |  |  |  |  |  |
| d |  |  |  |  |  |  |

Piros szín jelöli a kritikus, sárga szín a nem kritikus versenyhelyzetet.

**Kódolt állapottábla:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | x1x2  q1q2 | 00 | 01 | 11 | 10 | Z |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Versenyhelyzetek megvizsgálása:**

**Kimenet meghatározása:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Z** | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

**A kimenet egyenlete:**

**Aszinkron tároló elemek bemeneteinek vezérlése:**

Q1 átmeneti tábla

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Q1** | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

Vezérlési táblák

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

Q2 átmeneti tábla

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Q2** | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

Vezérlési táblák

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  | |  |  |  |
|  |  | x1 | |  |  |  |
|  | x2 | |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  | q2 |  |
|  |  |  |  |  | q1 |
|  |  |  |  |  |  |

**Kapcsolási rajz:**