DFA that accepts even number of 1’s and even number of 0’s with the input binary string.

0

0 1 invalid 0,1,invalid

1

invalid

1

1 0

0 invalid

Invalid

Source: Individual figures from the diagram are taken from lecture 1 : Finite Automata & Computability of Sir M Ashraful Amin, PhD and edited in Microsoft Word file

alphabet Σ = {0, 1, invalid}

states *Q* = {a, b, c, d, edie}

initial state a

accepting states *F* = {a}

table of transition function δ:

Input Σ

|  |  |  |  |
| --- | --- | --- | --- |
|  | 0 | 1 | invalid |
| a | b | d | edie |
| b | a | c | edie |
| c | d | b | edie |
| d | c | a | edie |
| edie | edie | edie | edie |

states *Q*