**Compiler Design week 1 assignment**

**Question:**

Implementation of Language recognizer for set of all strings ending with two symbols of same type.

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**Accepted form:**

The acceptable strings in the language are 00,11,000,011,100,111 and so on……

**DFA : 0**

**1**

**0**

**1 0**

**0 1**

**1**

**0**

**1**

DFA

1. M= (Q, ∑, δ, Q0, F) where
2. Q=Set of all states = {Q0, Q1, Q2, Q3, Q4}
3. ∑=Input Alphabet = {0,1}
4. Start state is Q0 and
5. F=Set of all final States= {Q1 and Q4} And the transitions are defined in the transition diagram

**Input:**

input //input string

**Output:**

Algorithm prints a message

“String accepted”: If the input is acceptable by the language,

“String not accepted” otherwise,

“Invalid token”: If the input string contains symbols other than input alphabet

**Test Cases:**

|  |  |
| --- | --- |
| **Input** | **Expected output** |
| aa | String accepted |
| abb | String accepted |
| aba | String not accepted |
| bba0 | Invalid token |
| abababaa | String accepted |
| aaaaa | String accepted |

**Outputs:**

A picture containing drawing, flower

Description automatically generated

A picture containing flower, drawing

Description automatically generated

A picture containing flower, bird

Description automatically generated

A picture containing drawing

Description automatically generated

A picture containing drawing, flower

Description automatically generated

Code will be submitted in txt format. Thank You