BULAGA, JELLY ROSE S. BSCPE-4A

SPL

Set B. L = {W ϵ(a,b)\*|W has both ba & ab as substring }

L = ϵ\*ba ϵ\* ϵ\*ab ϵ\* + ϵ\*ab ϵ\* ϵ\*ba ϵ\*

State Diagram:

b a

a a

b b

q1 q3 b a q6

q5 a, b

a b

q0 a a b a q8

b b

q2 q4 q7

|  |  |  |
| --- | --- | --- |
|  | a | b |
| q0 | q2 | q1 |
| q1 | q3 | q1 |
| q2 | q2 | q4 |
| q3 | q6 | q5 |
| q4 | q5 | q7 |
| q5 | q6 | q7 |
| q6 | q6 | q8 |
| q7 | q8 | q7 |
| q8 | q8 | q8 |

Q= q0, q1, q2, q3, q4, q5, q6, q7, q8

ϵ = (a,b)

Initial State= {q0}

Final State = {q8}

#include <stdio.h>

#include <conio.h>

#include <string.h>

int main ()

{

int jelly = 0, rose = 0, i, len;

char str[100];

printf ("Enter String:\n");

gets (str);

len = strlen (str);

for (i = 0; i < len; i++)

{

if (str[i] == 'a' && str[i + 1] == 'a')

{

jelly++;

}

if (str[i] == 'b' && str[i + 1] == 'b')

{

rose++;

}

if (jelly > 0 && rose > 0)

{

printf ("\nValid");

return 0;

}

}

printf ("\nInvalid");

return 0;

}