**Republic of the Philippines**

**Bohol Island State University-Main Campus**

**Tagbilaran City**

**College of Engineering and Architecture**

***Vision: A premier S&T University for the formation of a world class and virtues human resource for sustainable development in Bohol and the country.***

***Mission: BISU is committed to provide quality higher education in the arts and sciences, as well as in the professional and technological fields; undertake research and development and extension services for the sustainable development of Bohol and the country.***

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**Instructor**: Engr. Max Angelo D. Perin **Date:** Sept. 16,2019

**Subject:** Structure of Programming Language

**Problem:** at least 5 occurences of b’s

**State Diagram**:

a a a

Q4

Q3

Q5

Q2

Q1

Q1

b b

a b

Q0

a,b a b

b

|  |  |  |
| --- | --- | --- |
|  | **a** | **b** |
| Q0 | Q0 | Q1 |
| Q1 | Q1 | Q2 |
| Q2 | Q2 | Q3 |
| Q3 | Q3 | Q4 |
| Q4 | Q4 | Q5 |
| Q5 | Q5 | Q5 |

**TRANSITION TABLE**

**SOURCE CODE**

#include<iostream>

using namespace std;

int main()

{

int j=0, state=0;

int table[6][2]={{0,1},{1,2},{2,3},{3,4},{4,5},{5,5}};

int input;

int flag=0;

char st[20];

cin>>st;

while(st[j]!='\0')

{

// get column for symbol

switch(st[j])

{

case 'a': input=0; break; //column

case 'b': input=1; break; //column

}

state = table[state][input];

if (state==5){

flag=1;

break;

}

j++;

}

if (flag==1){

cout<<"ACCEPTED";

}

else {

cout<<"NOT ACCEPTED";

}

return 0;

}

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