Republic of the Philippines

**BOHOL ISLAND STATE UNIVERSITY**

**MAIN CAMPUS**

**COLLEGE OF ENGINEERING AND ARCHITECTURE**

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*Vision: A premiere S&T university for the formation of world class and virtuous 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.*

NAME: Derek John B. Soliva SUBJECT: CpE 412

YR/SEC: BSCPE-4 INSTRUCTOR: Engr. Max Angelo Perin

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**PROGRAMMING ASSIGNMENT #0-M**

**D**. L= {w ϵ {a,b}\* | every ***a*** in w is followed by ***bbb***}

­

**Deterministic Finite Automata (DFA)**

a

b

a

b

b

b

b

qqqq

q4

a

a

a

|  |  |  |
| --- | --- | --- |
| δ | a | b |
| 0 | 1 | 0 |
| 1 | 5 | 2 |
| 2 | 5 | 3 |
| 3 | 5 | 4 |
| 4 | 1 | 4 |
| 5 | 5 | 5 |

a,b

**Formal Definition:**

L= ({q0,q1,q2,q3,q4,q5}, {a,b}, δ, {q0}, {q4})

TRANSISTION TABLE

SPL (D) SOURCE CODE

#include<iostream>

#include<cstring>

using namespace std;

int main()

{

char str[100];

int q, count=0, countt;

cout<<"Enter String: ";

cin>>str;

cout<<str;

for(q=0; q<strlen(str); q++)

{

if(str[q]=='a')

{

if (str[q+1]=='b'&&str[q+2]=='b'&&str[q+3])

{

countt++;

}

else

{

cout<<"\nInvalid";

count++;

break;

}

}

if(str[q]!='a'&&str[q]!='b')

{

cout<<"\nInvalid";

count++;

break;

}

}

if(countt>0&&count==0)

{

cout<<"\nAccepted";

}

return 0;

}