Republic of the Philippines

**BOHOL ISLAND STATE UNIVERSITY**

**MAIN CAMPUS**

**COLLEGE OF ENGINEERING AND ARCHITECTURE**

Tel: 038-4113289 Telefax: 038-5017516

6300 Tagbilaran City

*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

ID NO.: 309434

**PROGRAMMING ASSIGNMENT #0-M**

c. L= {w ϵ {a,b}\* | w contains at least 5 occurences of **b**}

­

**a,b**

**b**

**b**

**b**

**b**

**a**

**a**

**a**

**a**

**a**

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

M={ {q0,q1,q2,q3,q4,q5}, {a,b}, δ, {q0}, {q5}}

**Deterministic Finite Automata (DFA)**

**CODE:**

**#include<iostream>**

**#include<cstring>**

**using namespace std;**

**int main(){**

**char str[100];**

**int j,count=0,count1;**

**cout<<"Enter String: ";**

**gets(str);**

**for(j=0;j<strlen(str);j++){**

**if(str[j]=='b'){**

**count++;**

**}**

**if(str[j]!='a'&&str[j]!='b'){**

**cout<<"Invalid";**

**count1++;**

**break;**

**}**

**}**

**if(count>=5&&count1==0){**

**cout<<"Accepted";**

**}**

**if(count<5){**

**cout<<"Invalid";**

**}**

**return 0;**

**}**