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: MARIJUN G. APALISOK SUBJECT: CpE 412

YR/SEC: BSCPE 4 INSTRUCTOR: ENGR. MAX ANGELO PERIN

ID NO.: 873815

**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;**

**cin>>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;**

**}**