Republic of the Philippines

**Bohol Island State University**

**Main Campus**

Tagbilaran City

**Vision:***A premier Science and Technology 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.*

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Year & Section: BS CpE 5 - A Instructor: Engr. Max Angelo Perin

**ASSIGNMENT in STRUCTURE OF PROGRAMMING LANGUAGES**

**DFA:**

**STATE:**

|  |  |  |
| --- | --- | --- |
|  | **A** | **B** |
| **Q0** | **Q1** | **Q2** |
| **Q1** | **Q1** | **Q3** |
| **Q2** | **Q4** | **Q2** |
| **Q3** | **Q5** | **Q5** |
| **Q4** | **Q6** | **Q5** |
| **Q5** | **Q7** | **Q5** |
| **Q6** | **Q6** | **Q7** |
| **Q7** | **Q7** | **Q7** |

**CODE:**

**#include <iostream>**

**using namespace std;**

**/\* run this program using the console pauser or add your own getch, system("pause") or input loop \*/**

**int main(int argc, char\*\* argv) {**

**int j=0, state=0;**

**int table[8][2]={{1,2},{1,3},{4,2},{6,5},{6,5},{7,5},{6,7},{7,7}};**

**int input;**

**int flag=0;**

**char st[10];**

**cin>>st;**

**while(st[j]){**

**switch (st[j]){**

**case 'a':input=0;break;**

**case 'b':input=1;break;**

**}**

**state=table[state][input];**

**if (state==7){flag=1;break;**

**}**

**j++;**

**}**

**if (flag==1){cout<<"ACCEPTED";**

**}**

**else {cout<<"NOT ACCEPTED";**

**}**

**return 0;**

**}**