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: Joseph Jay Loretero SUBJECT: CpE 412

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

ID NO.: 788148

**PROGRAMMING ASSIGNMENT #0-M**

B. L = {W ϵ {a, b }\* | W has both ***ba*** and ***ab*** as substrings}

**Deterministic Finite Automata (DFA)**

a

b

a

Q2

b

b

a,b

Q1 Q3

a

a

Q0 Q4

b

b

Q5 Q7

a

a

Q6

a

b

b

TRANSISTION TABLE

M = {Q0,Q1,Q2,Q3,Q4,Q5,Q6,Q7},{a,b},δ,q0,{Q4}

|  |  |  |
| --- | --- | --- |
| δ | a | b |
| Q0 | Q1 | Q5 |
| Q1 | Q1 | Q2 |
| Q2 | Q2 | Q3 |
| Q3 | Q4 | Q3 |
| Q4 | Q4 | Q4 |
| Q5 | Q6 | Q5 |
| Q6 | Q7 | Q6 |

**SPL (b) SOURCE CODE**

