***Instructions: Kindly fill-up with necessary information in the space provided.***

|  |  |  |  |
| --- | --- | --- | --- |
| **Student’s Name** | Magno, Ranier B. | **Section** | **O-BS5MA** |
| *(Last Name First Name Middle Initial)* | **School Year** | **2020-2021** |
| **Degree Program** | *Bachelor of Science in Computer Science* | **Year Level** | **○ 1st Year**  **○ 2nd Year**  **○ 3rd Year**  **○ 4th Year** |
| **Course Code** | *CS315* |
| **Course Title** | *Automata Theory and Formal Languages* | **Semester** | **○ 1st Semester**  **○ 2nd Semester** |
| **Instructor/Professor** | Ma’am. Hazel San L. Patilano | **Week(s) Covered** | **Week 2** |

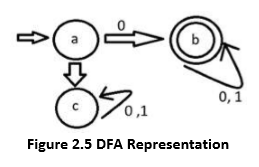
***DO NOT FORGET TO SAVE YOUR FILE AS :***

***<Lastname\_CourseCode\_Section\_WeekNo\_Semester\_ACTIVITYNo.docx>*** *Example:* ***Delacruz\_CC111\_BS1MA\_Week1\_1stSem\_ACT1.docx***

*\* You may write below this line.*

**CONTENT FOR ASSESSMENT:** Activity Number 1 (20-points).

Problem:

1. Let L = {001} as shown in DFA Representation is acceptable or not.

Deterministic finite automaton be:

|  |  |  |
| --- | --- | --- |
|  | 0 | 1 |
| A | B | C |
| B | B | B |
| C | C | C |

Q = {a, b, c} δ =

∑ = {0, 1}

q0 = {a}

F = {b}

0 0 1

Let L = {001}, is acceptable, it meets the final state of representation. First input was 0, it directs to state B (Final State) and maintain to meet the other inputs. It will only be accepted if the first input of a set is 0, if the first input of a set is 1 it will go to state C which is a dead state/trap state that cannot go to final state.