**Part A**

**Objective**

Understand Memory Storage in circuits

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| 1. Using logic.ly complete logic gate circuit below (Memory) Change the toggle switch value and then operate the push button Observe and explain the output by building a Truth Table |
| |  |  |  |  | | --- | --- | --- | --- | | B | S | Q | notQ | | 0  0 | 0  1 | 0  1 | 1  0 | | 1 | 0 | 0 | 1 | | 1 | 1 | 1 | 0 |     When the button is pressed the state of the switch is saved to the Q output  Which is why 0-1 and 0-0 have two outputs because it depends on what was the last input |
| 1. Using logic.ly complete logic gate circuit below |
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| 1. Append circuit in 1 (Memory) above to outputs of circuit 2 (Decoder). Identify data lines and address lines and connect to Memory. Observe that the Encoder input values are stored. Connect a 7-segment display to the outputs of memory (using appropriate inputs) |
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**Hand up this practical report at the end of session and ensure it has been checked**

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| **Date** | **22/11/23** | **Checked** |  |
| **Group** | **A / B** |  |  |