**Calculator**

**Using Logic Gates**

**By:**

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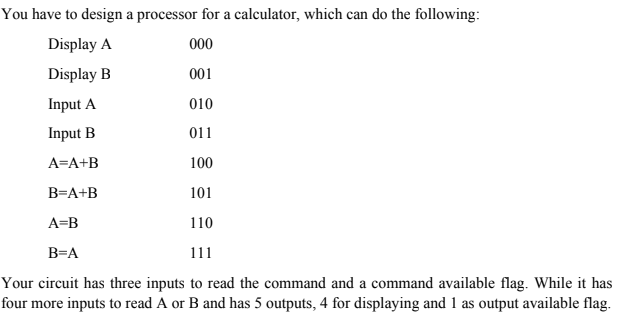
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Bsee-210080 (Abdul Rahman)

**Problem Statement:**

* Inputs:
  + Clock Pulse CP
  + Command Available CA
  + Command C0...C2
  + Input Data A0...A3
* Output:
  + Output Available OA
  + Output Data D0...D3

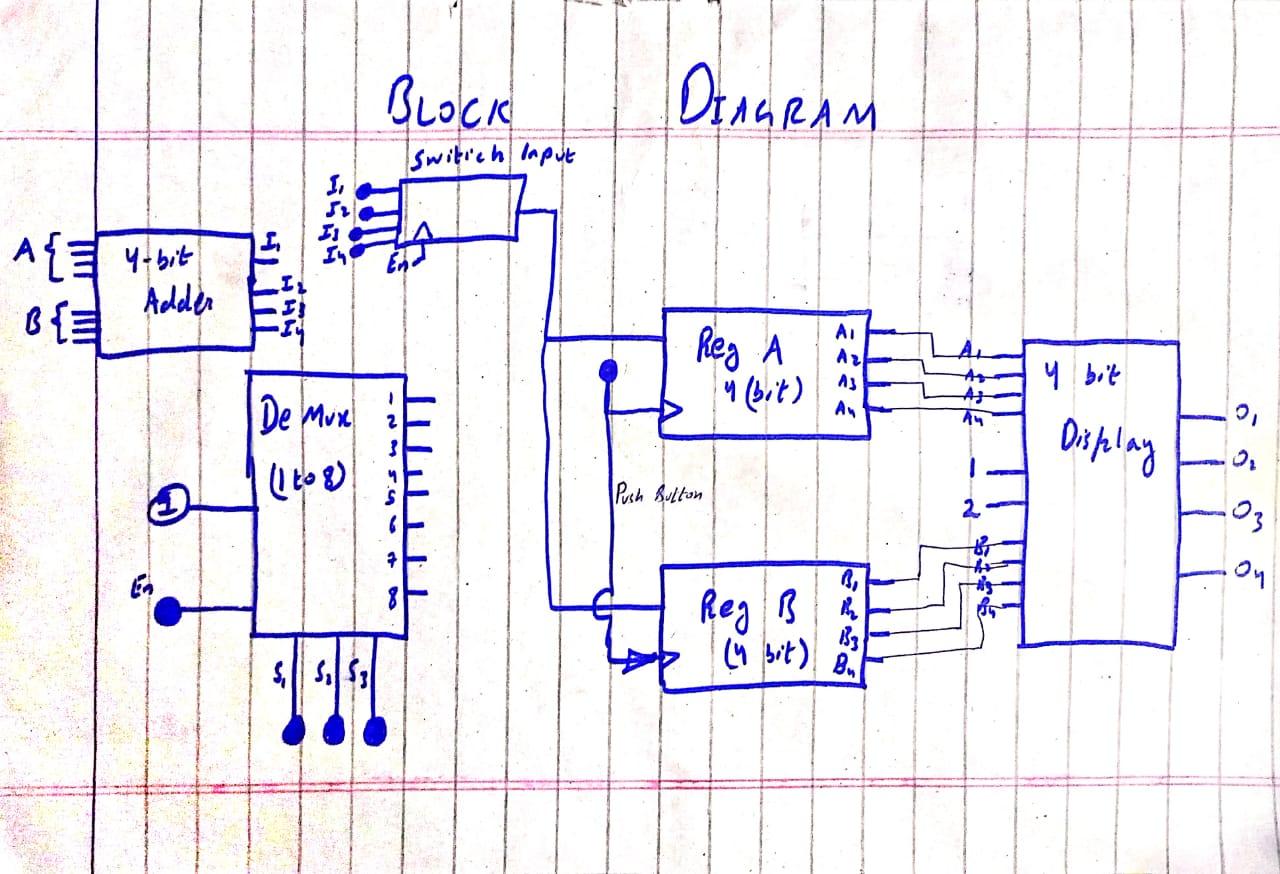


**Introduction:**

It is a Logic Gate IC’s based calculator, which perform different functions using 3 bit input command and 4 bit algebraic input’s.

Our first approach is making a RAF Block approach Diagram.

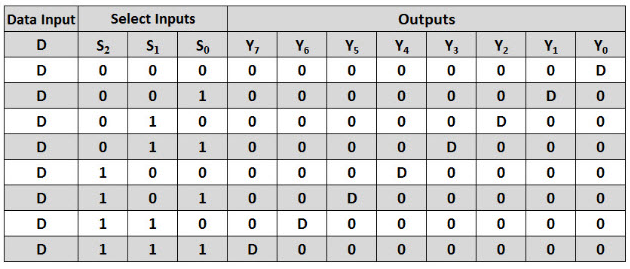
**Block Diagram:**



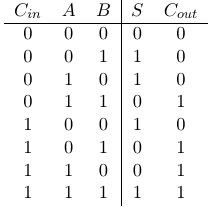
**Truth Table:**

It gives the closed output future idea of the components output:

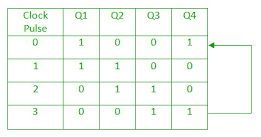
* De-mux(1-to-8) (74LS138N)



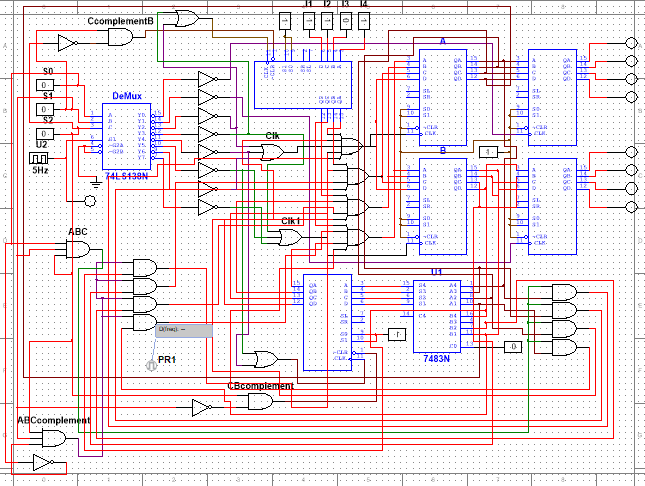
* 7483 ( 4-BIT ADDER )



* 74LS194 ( UNIVERSAL REGISTER )

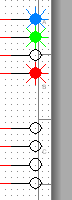


**Schematic Diagram:**



**Multisim Results:**

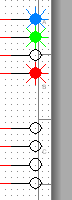
* Display A

* Display B

* Input A

* Input B

* A = A+B

* B = A+B

* A = B

* B = A

**Conclusion:**

Hence, this project perform its all task correctly and all connections and gates and IC’s we use are completely working and performing according to their datasheet truth table.