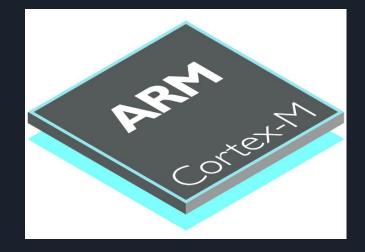
Projet PARM

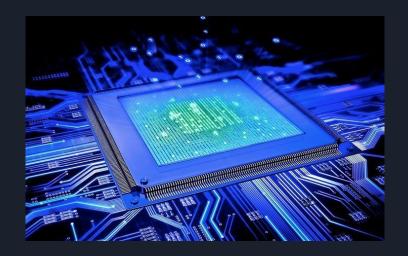
Équipe MIVA



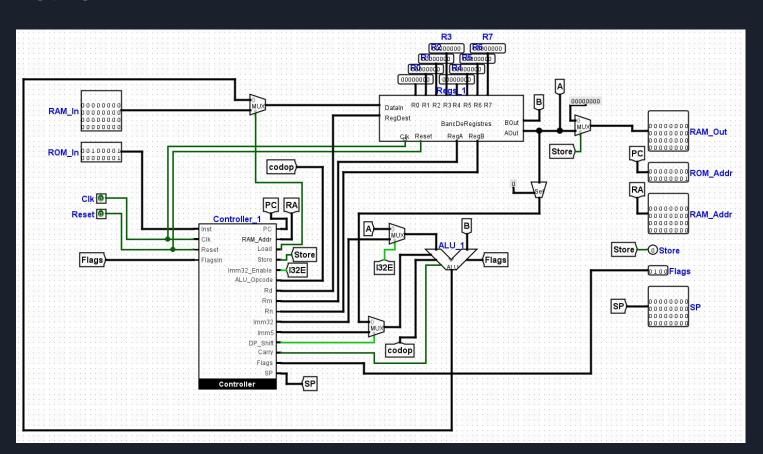
Mathieu Schalkwijk - Ihor Melnyk - Alexis Roche - Valentin Nasone

SOMMAIRE

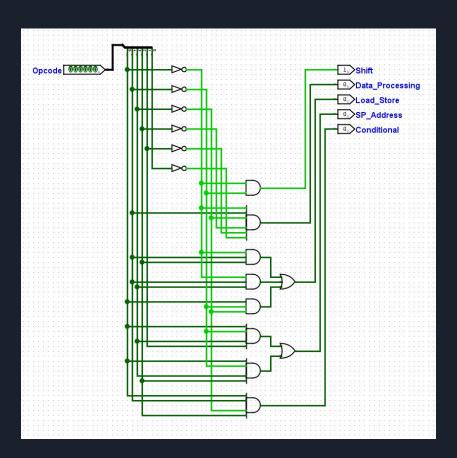
- Présentation du circuit
- Tests vectoriels
- Démo de l'assembleur
- Démo sur Logisim



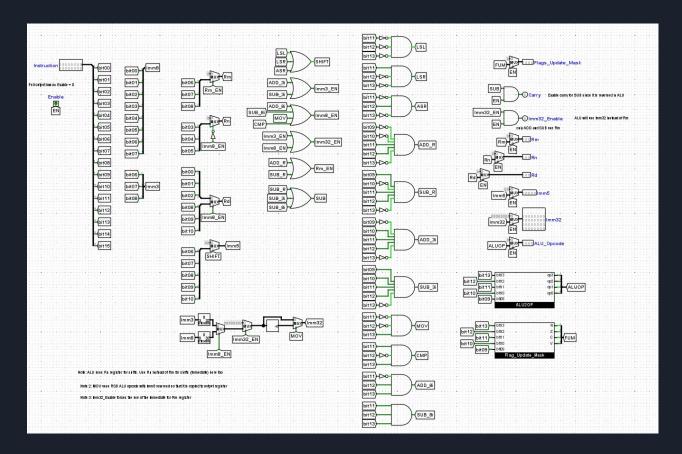
CPU



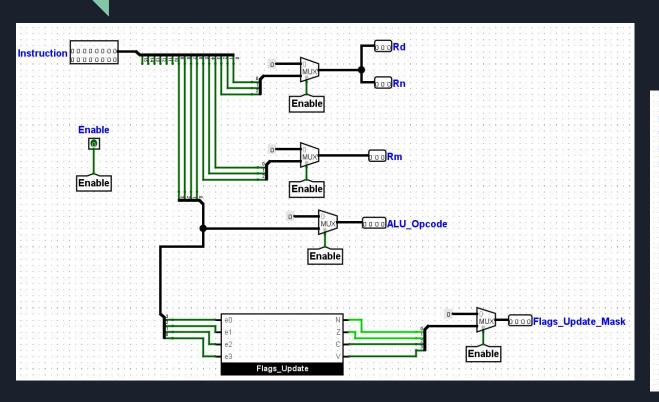
Contrôleur : Décodeur d'instruction



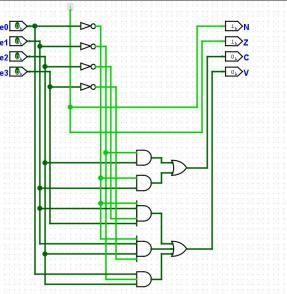
Contrôleur: Shift, Add, Sub, Mov



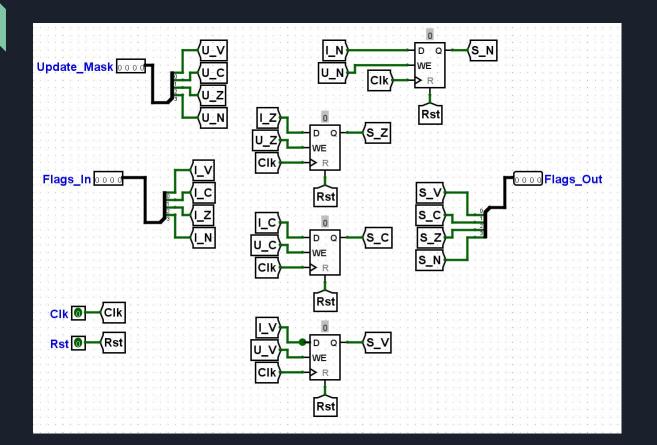
Contrôleur : Data Processing



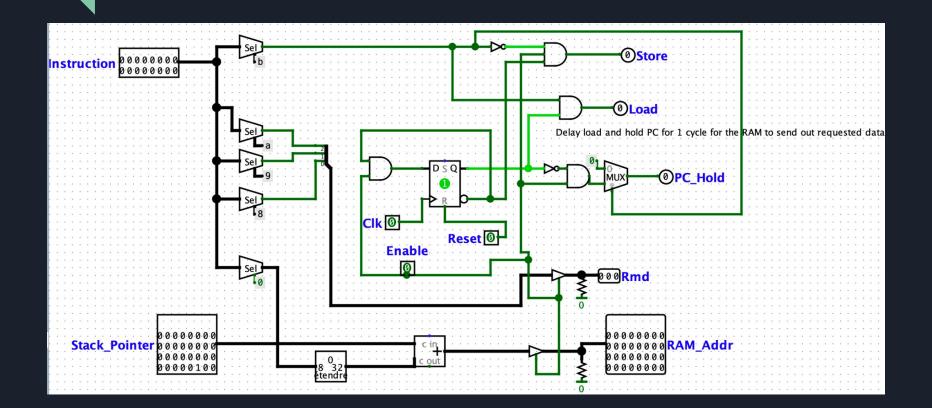
Flags_Update



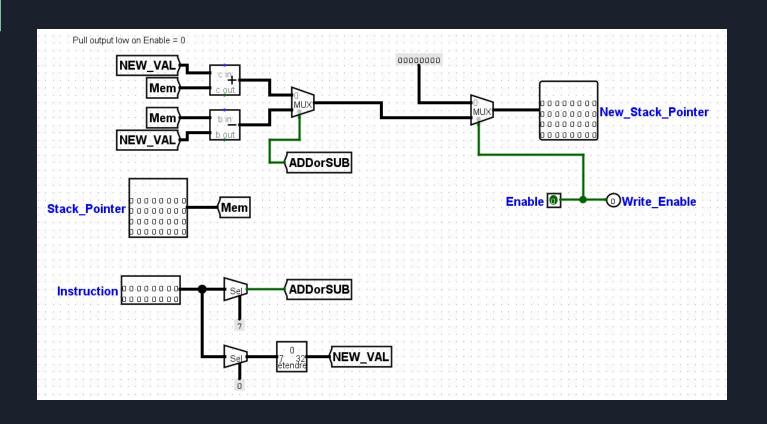
Contrôleur : Flag APSR



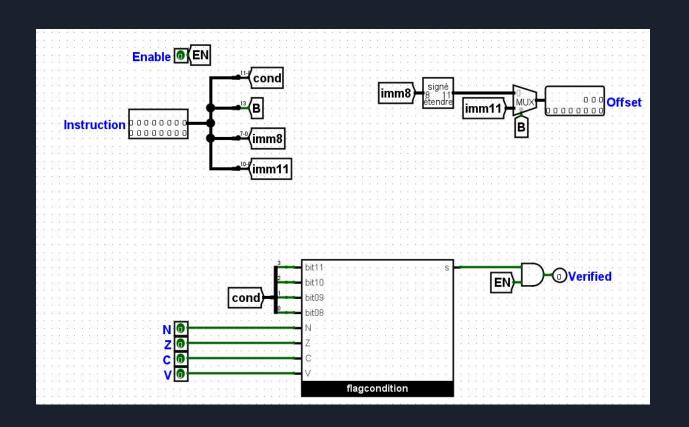
Contrôleur : Load, Store



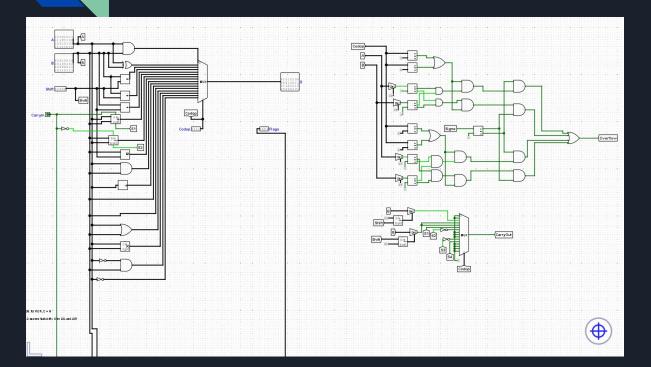
Contrôleur : SP Address

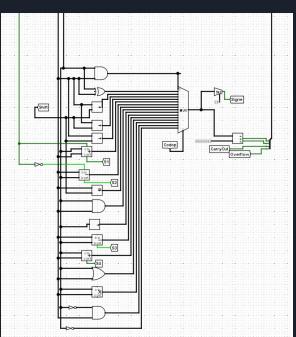


Contrôleur : Conditional

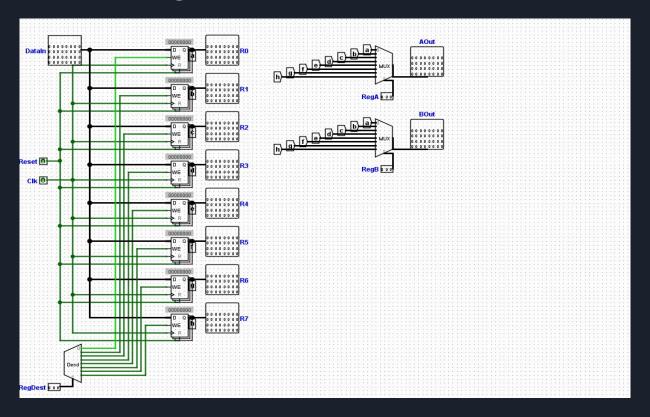


ALU





Banc de registres

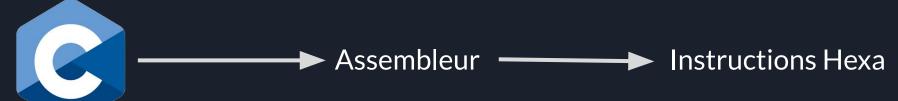


Nos Tests

```
#Test vector for Shift Add Sub Mov
Instruction[16] Enable[1] Flags Update Mask[4] Carry[1] Imm32 Enable[1] Rm[3] Rn[3] Rd[3] Imm5[5] Imm32[32] ALU Opcode[4]
      Instruction
                        Enable Flags Update Mask
                                                      Imm32 Enable
                                                                                     Imm5
                                                                                           Imm32
                                                                                                                         ALU Opcode
#LSLS
                              1110
                                                                  999
                                                                        001
                                                                               010
                                                                                                                         0010
      0000000011001010
                                                                                     00011
                                                                                           0000000001101001
                        1
                              1110
                                                                  000
                                                                        101
                                                                               001
                                                                                     00001
                                                                                                                         0010
      0000001011101001
                        1
                              1110
                                                                  999
                                                                        101
                                                                               991
                                                                                     01011
                                                                                           9919
      0000000011001010
                        0
                              0000
                                                                  000
                                                                        000
                                                                               999
                                                                                     00000
                                                                                           0000
#LSRS
      9999199911991919
                              1110
                                                                  999
                                                                        991
                                                                               919
                                                                                     00011
                                                                                           9999999999999999999999999999
                                                                                                                         9911
      0000100011001111
                        1
                              1110
                                                                  999
                                                                        001
                                                                               111
                                                                                     00011
                                                                                           0011
      0000100011001101
                        1
                              1110
                                                                  000
                                                                        001
                                                                               101
                                                                                     00011
                                                                                           0011
      0000100011001010
                              9999
                                                                  999
                                                                        999
                                                                               999
                                                                                     99999
                                                                                           9999999999999999999999999999
                                                                                                                         9999
#ASRS
      0001011111001011
                        1
                              1110
                                                      0
                                                                  000
                                                                        001
                                                                               011
                                                                                     11111
                                                                                           0100
      0001011001001011
                        1
                              1110
                                                                  000
                                                                        001
                                                                               011
                                                                                     11001
                                                                                           0100
                        1
                                                                  999
                                                                        991
                                                                               919
      0001000011001010
                              1110
                                                                                     00011
                                                                                           0100
                              0000
                                                                  000
                                                                                           0000
      0001000011001010
                                                                        000
                                                                               000
                                                                                     00000
```

```
A[32] B[32] Shift[5] CarryIn[1] Codop[4] S[32] Flags[4]
# A B Shift CarryIn Codop S Flags
# AND
0000
000001000101010100001000000010001
                        0000
               0
                0000
00000000000110000100011001100000
                        9999
9999
000001001000101110000000000010000
                        0000
# FOR
0
                0001 100111010100111011011111000010100 1000
0
                 00011011100111101110110100000111
                0001
0000
```

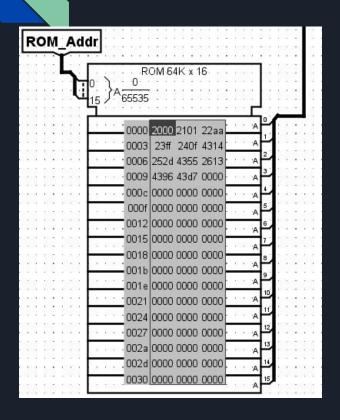
Démo Assembleur

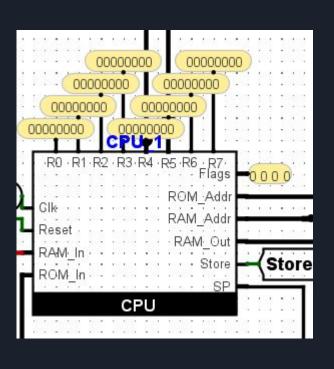






Démo Logisim





MERCI