**Pc\_Unit**

Graphical user interface, text

Description automatically generated

**Pc\_Adder**

**Graphical user interface, text, application

Description automatically generated**

**Branch\_Adder**

**Text

Description automatically generated**

**Instruction\_Memory**

**Table

Description automatically generated**

**Text

Description automatically generatedText

Description automatically generated with medium confidenceControl\_Unit**

**Mux\_RegDst**

**Text

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Mux\_Memory**

**Graphical user interface, text, application

Description automatically generated**

**Mux\_Alu**

**Text

Description automatically generated**

**Mux\_Pc**

**Register\_File**

**A picture containing table

Description automatically generated**

**Graphical user interface, text, application, email

Description automatically generated**

**Sign\_Extend**

**Shift\_Left\_2**

**Text

Description automatically generated**

**Alu\_Control**

**Text

Description automatically generated Graphical user interface, text, application, email

Description automatically generated**

**Alu\_Unit**

**Graphical user interface, text, application

Description automatically generated Graphical user interface, text

Description automatically generated**

**Data\_Memory**

**Text

Description automatically generated**

Graphical user interface, text

Description automatically generated with medium confidence

**ADD $v0, $a0, $a1**

**$v0 = 12**

**Graphical user interface

Description automatically generated**

**SW $V0 , 8($ZERO)**

**Graphical user interface

Description automatically generated**

**LW $a2, $8($Zero)**

**$a2 = 12**

**Graphical user interface

Description automatically generated**

**Beq $v0 , $a2, Good\_Processor**

**Graphical user interface

Description automatically generated with low confidence**

**Sub $s1 , $a1, $a0**

**$a1 - $a0 = 7 – 5 = 2**

**$s1 = 2**

**Graphical user interface

Description automatically generated with medium confidence**