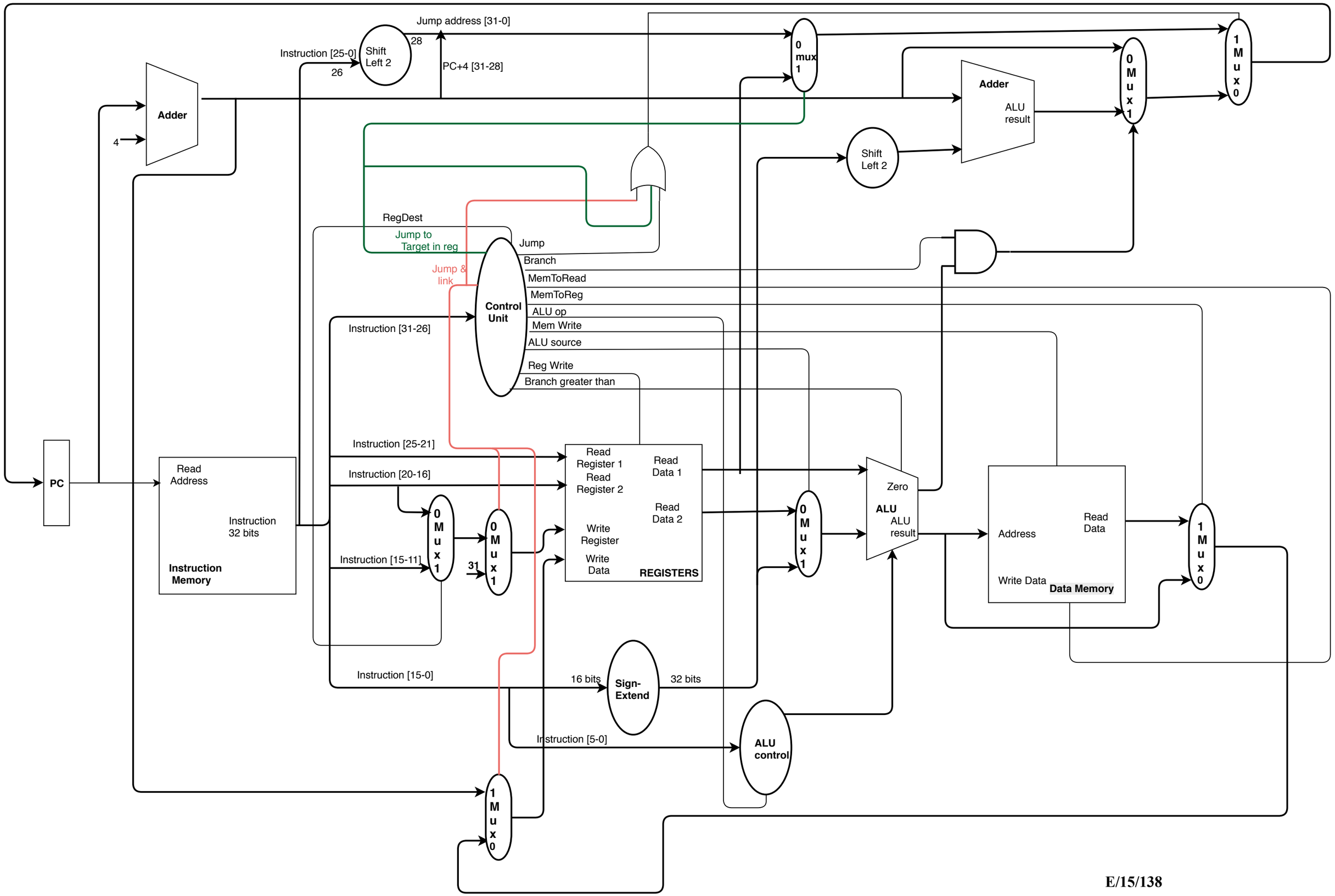

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Components inside ALU

Components	Connected output Ports
1. Adder	ALU-result
2. Substractor	ALU-result
3. Multiplier	ALU-result
4. Divider	ALU-result
5.Bit wise AND	ALU-result
6.Bit wise OR	ALU-result
7.Bit wise NOR	ALU-result
8.Bit wise XOR	ALU-result
9.Shift Right	ALU-result
10.Shift left	ALU-result
11.Comparator for Beq	Zero
12.Comparator for Bge	Zero

Other than these components Multiplexers are used inside to get the correct output

Branch greater than signal from control unit will decide (using a multiplexer) whether to give the **beq** circuit output or **bge** circuit output to port **zero**

Note on J type insturctions

It is only given that the ISA for Jump and Jump and link instructions
For jump and link to address in target register, assume the instruction[25-21] will carry the target register address

And the Link register for this processor design is **register number 31**

green and pink connections are also control signals,it is colored just to see the connections clearly