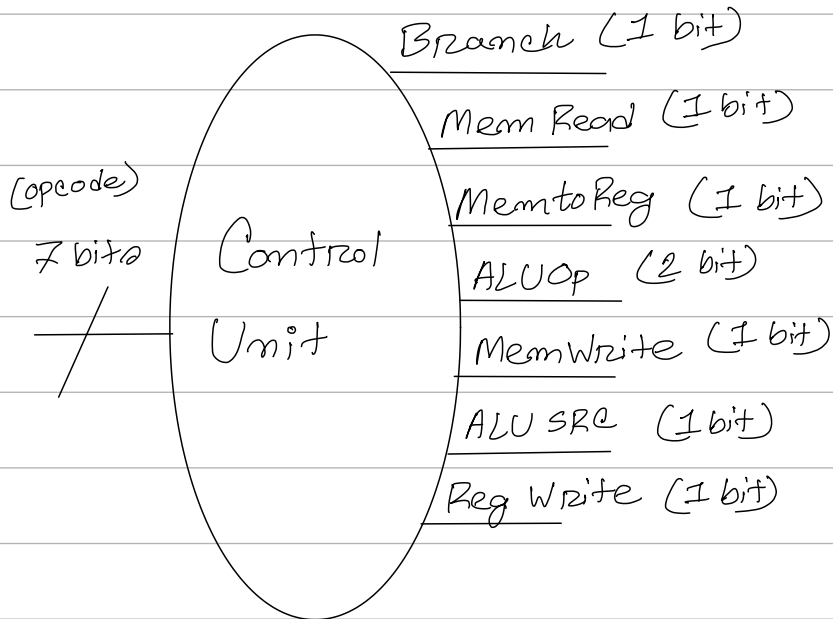


Control Unit

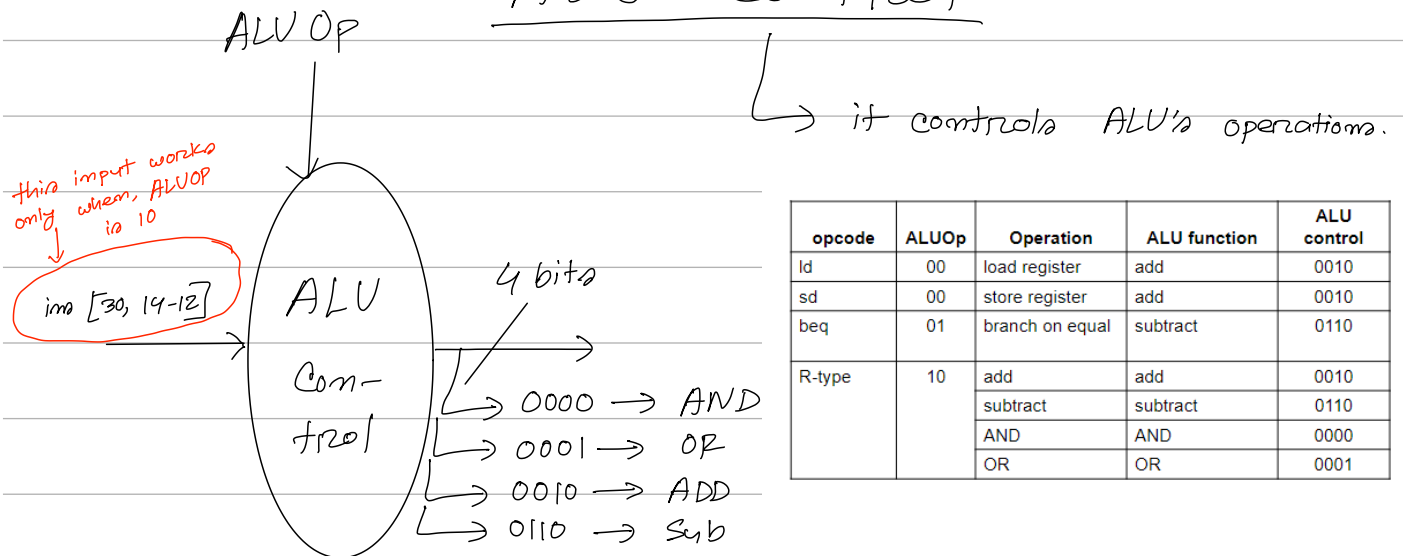


ALU Op \Rightarrow 00 \rightarrow load / Store

01 \rightarrow Beq

10 \rightarrow R type

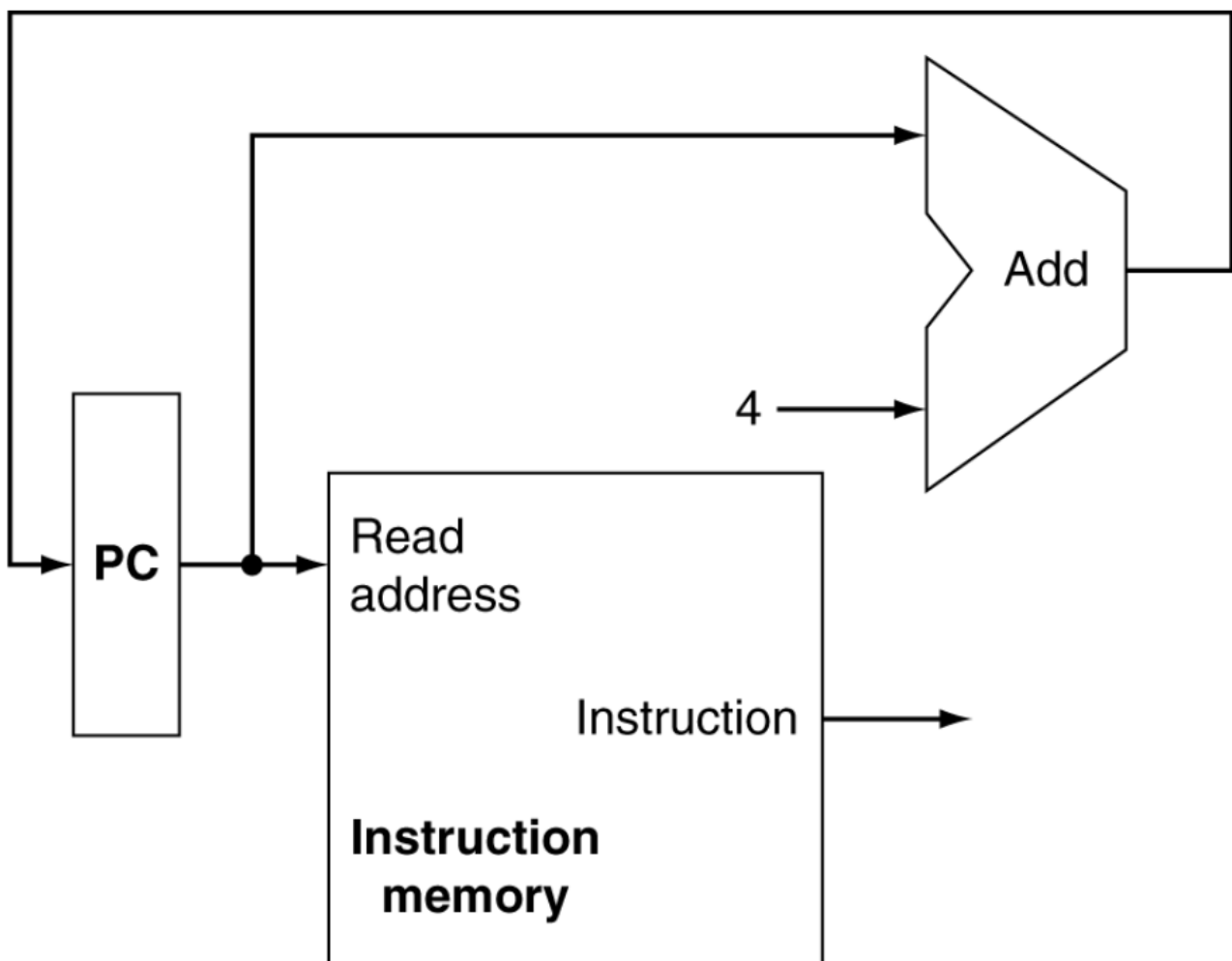
ALU Control



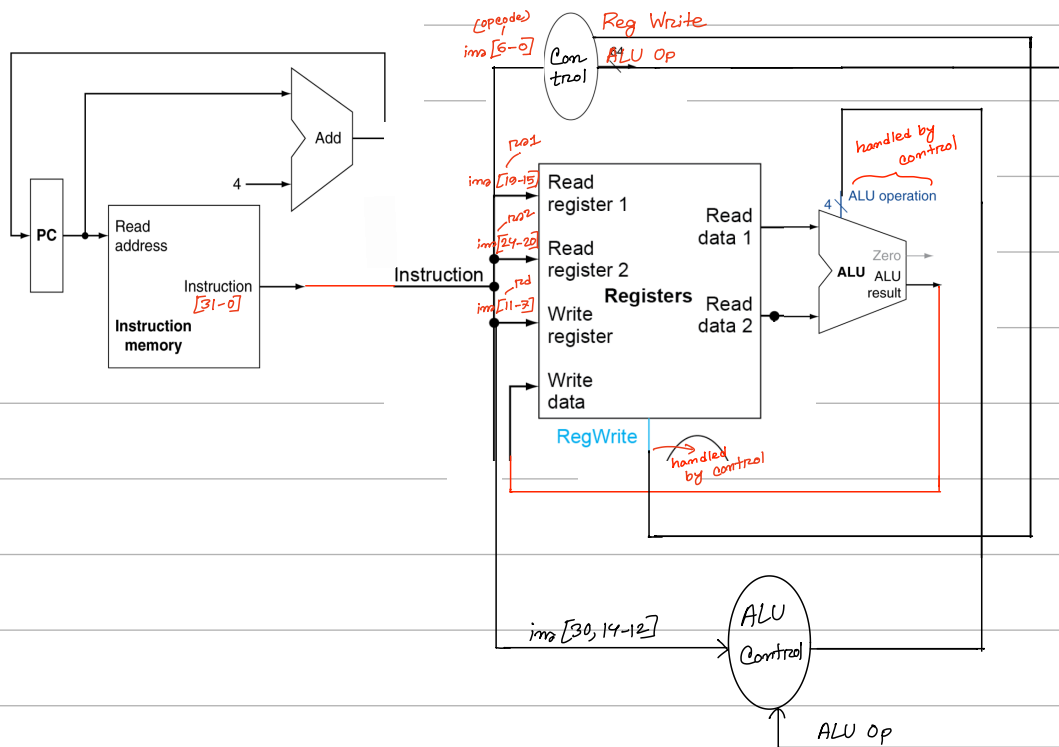
Building Datapaths

Instruction Fetch:

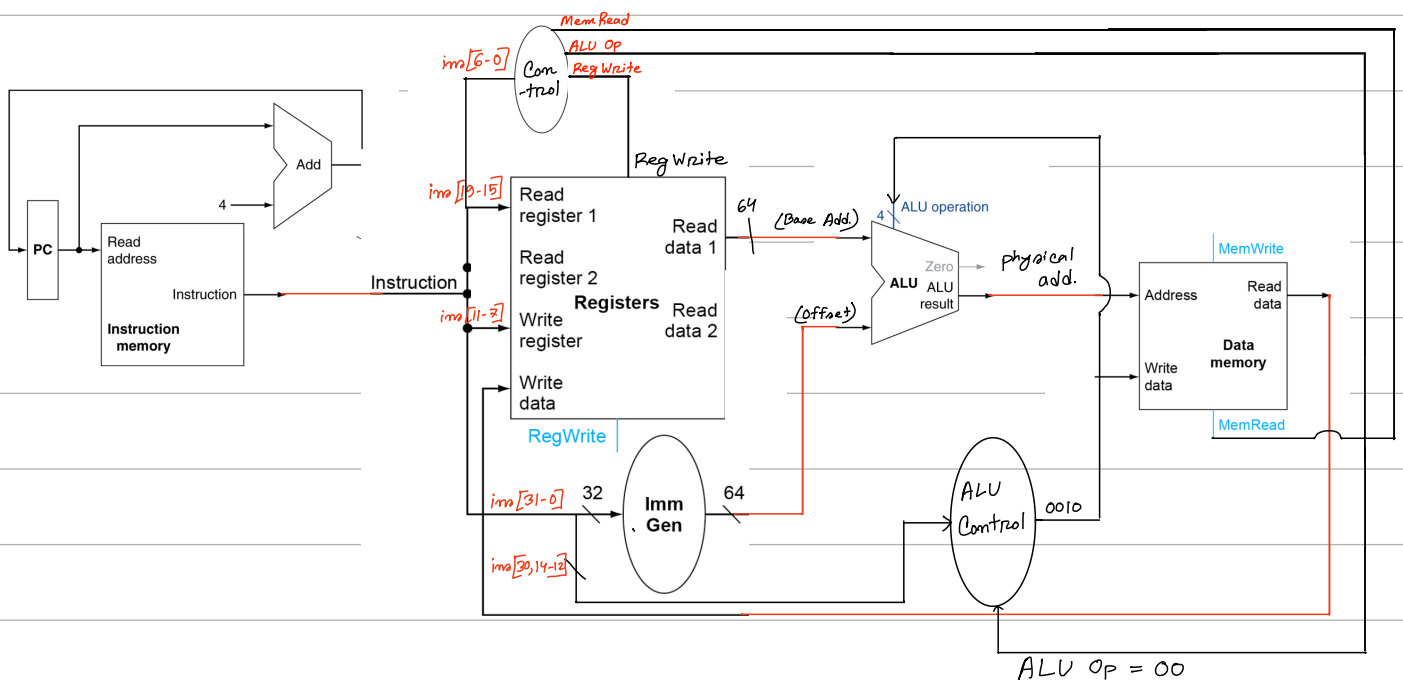
- (i) Access the program counter.
- (ii) Pass the address/location to instruction memory.
- (iii) Instruction memory outputs the respective instruction.
- (iv) Increment the PC.



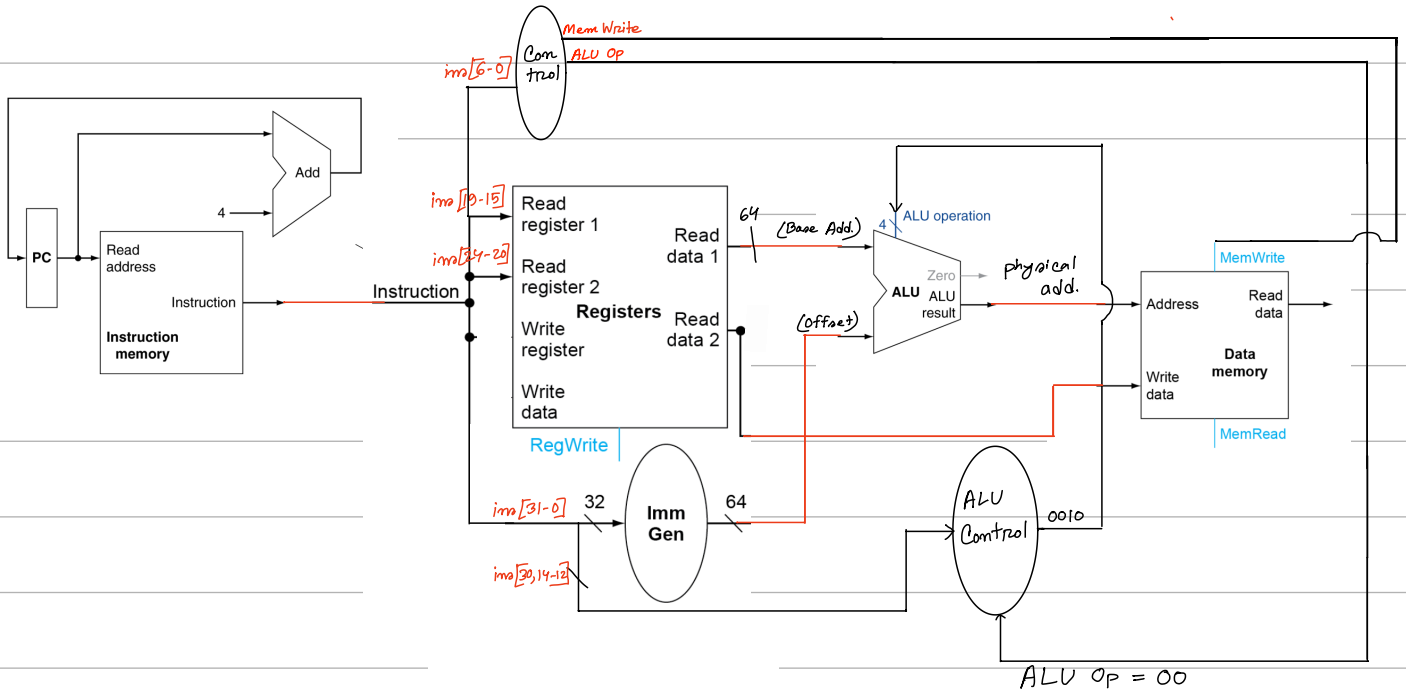
R-type Datapath :



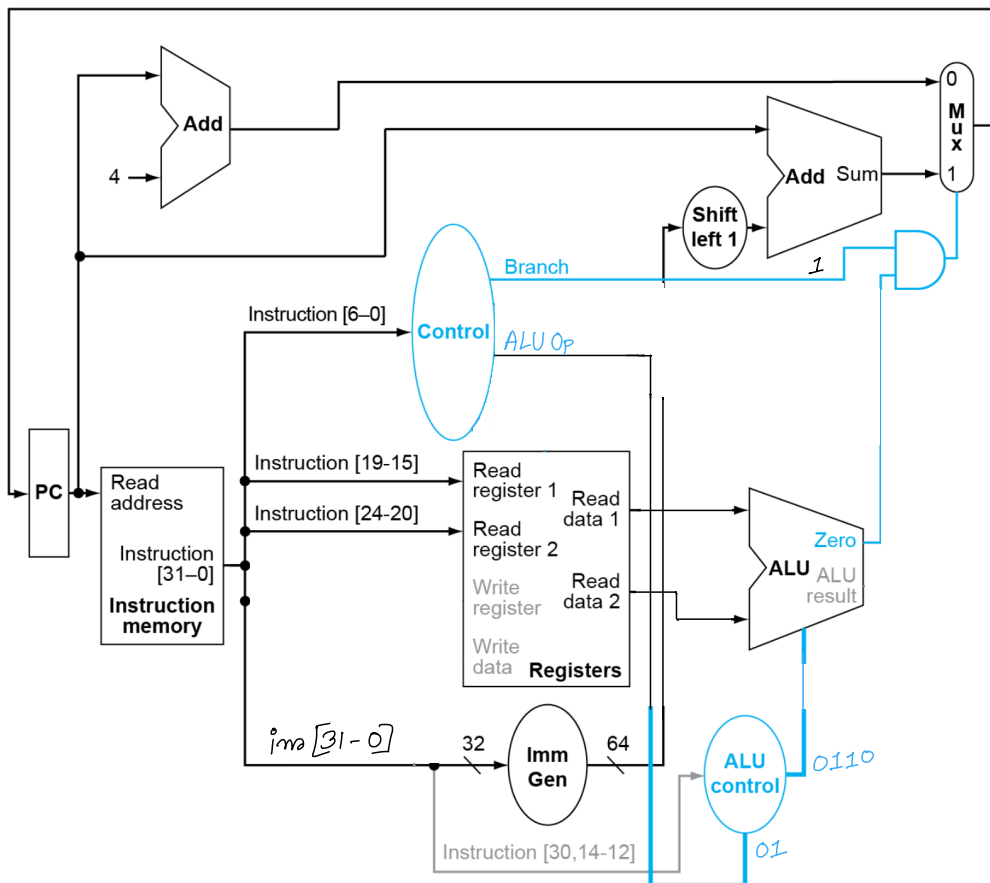
Load Datapath : (i)



Store Datapath: (S)



Branch-on-Equal Datapath:



Full Datapath with Control

