



Figure 7.8 Three-bus organization of the datapath.

Step	Action
1	PC_{out} , $R=B$, MAR_{in} , Read, IncPC
2	WMFC
3	MDR_{outB} , $R=B$, IR_{in}
4	$R4_{outA}$, $R5_{outB}$, SelectA, Add, $R6_{in}$, End

Figure 7.9 Control sequence for the instruction Add R4,R5,R6 for the three-bus organization in Figure 7.8.

Consider the three-operand instruction

Add R4,R5,R6

control sequence for executing this instruction.