Case 1: Tests for Function Units

All registers equal to 2.

Instruction	IF	ID	EX	MEM	WB
Addui r2, 11	1	2	3	--	4
sub r5, r1	2	3	4	--	5
Addi r6, 5	3	4	5	--	6
Add r4, r3	4	5	6	--	7
Addi r1, 5	5	6	7	--	8
sub r5, r2	6	7	8	--	9
Put r1	7	8	9	--	10
Put r2	8	9	10	--	11
Put r4	9	10	11	--	12
Put r6	10	11	12	--	13
Put r5	11	12	13	--	14
Halt	12	--	--	--	--

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Case 2: Tests for Load/Store Function

r1=10, r2 =15, r3=10, r4 = 4, r5=0, r6=4

Instruction	IF	ID	EX	MEM	WB
Sw r3, r4	1	2	3	4	--
Add r1, r2	2	3	4	--	5
Addui r2, 10	3	4	5	--	6
Lw r5, r6	4	5	6	7	--
Halt	7	--	--	--	--

Case 3: Tests for Forwarding

All registers equal to 10.

Instruction	IF	ID	EX	MEM	WB
Add r1, r2	1	2	3		4
Add r3, r1	2	3	4		5
Add r4, r2	3	4	5		6
Sub r5, r4	4	5	6		7
Addi r2, 4	5	6	7		8
Addi r1, 4	6	7	8		9
Put r3	7	8	9		10
Put r5	8	9	10		11
Halt	11				

Case 4: Test for Branch Function (Bubble Insertion)

r3=r1=1, other registers equal to 2

Instruction	IF	ID	EX	MEM	WB
Add r1, r2	1	2	3		4
Bz r3, 3	2	3	4		5
Addi r2, 2	5 r1=3	6	7		8
Addui r4, 4	6 r2=2	7	8		9
Bp r1, 6	7	8	9		10
Addi r6, 6					
Addi r5, 7	10	11	12		13
Put r2	11	12	13		14
Put r1	12	13	14		15
Put r3	13	14	15		16
Put r6	14	15	16		17
Halt	17				

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