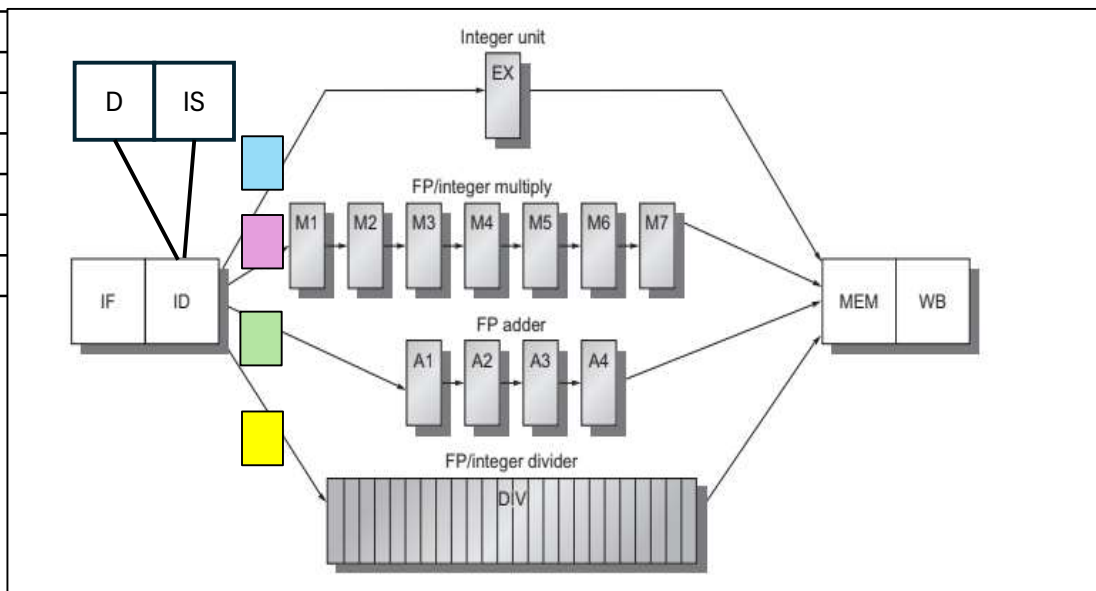


CS613 Homework 8	Instructions	1	2	3	4	5	6	7	8	9	10	11
1	add x1, x0, x0	IF	D	IS	EX R1	MEM R1	WB R1					
2	addi x5, x0, 2000		IF	D	IS	EX R2	MEM R2	WB R2				
3	fld f1, -8(x5)			IF	D	IS	EX R6	MEM R6	WB R6			
4	addi x2, x2, 10				IF	D	IS	EX R1	MEM R1	WB R1		
Strt: 5	fld f1, -8(x5)					IF	D	IS/s	s/IS	EX R6	MEM R6	WB R6
6	addi x5, x5, 8						IF	D/s	s/D	IS	EX R1	MEM R1
7	fadd.d f7, f7, f1							IF/s	s/IF	D	IS	EX1 R3
7A	fmul.d f7, f10, f1									IF	D	IS
8	fsd f7, -8(x5)									IF	D	
9	subi x2, x1, 1										IF	
10	bne x2, x2, Strt											
End 11	xor x4, x1											
12	fld f1, -8(x5)											
13	addi x5, x5, 8											
14	fadd.d f7, f7, f1											

Reservation Stations	Shorthand
ALU-1	R1
ALU-2	R2
FPA-1	R3
FPA-2	R4
Mul	R5
L/S	R6



CS613 Homework 8	Instructions	12	13	14	15	16	17	18	19	20	21	22
1	add x1, x0, x0											
2	addi x5, x0, 2000											
3	fld f1, -8(x5)											
4	addi x2, x2, 10											
Strt: 5	fld f1, -8(x5)											
6	addi x5, x5, 8	WB R1										
7	fadd.d f7, f7, f1	EX2 R3	EX3 R3	EX4 R3	MEM R3	WB R3						
7A	fmul.d f7, f10, f1	EX1 R5	EX2 R5	EX3 R5	EX4 R5	EX5 R5	EX6 R5	EX7 R5	MEM R5	WB R5		
8	fsd f7, -8(x5)	IS	EX R6	B	B	B	B	B	EX R6	MEM R6	WB R6	
9	subi x2, x1, 1	D	IS	B	EX R1	MEM R1	WB R1					
10	bne x2, x2, Strt	IF	D	IS/s	s/IS	EX R2	MEM R2	WB R2				
End 11	xor x4, x1		IF	D	IS	NOP	NOP	NOP				
12	fld f1, -8(x5)						IF	D	IS/s	IS/s	s/IS	EX R6
13	addi x5, x5, 8							IF	D/s	D/s	s/D	IS
14	fadd.d f7, f7, f1								IF/s	IF/s	s/IF	D

Reservation Stations	Shorthand
ALU-1	R1
ALU-2	R2
FPA-1	R3
FPA-2	R4
Mul	R5
L/S	R6

CS613 Homework 8	Instructions	23	24	25	26	27	28	29
1	add x1, x0, x0							
2	addi x5, x0, 2000							
3	fld f1, -8(x5)							
4	addi x2, x2, 10							
Strt: 5	fld f1, -8(x5)							
6	addi x5, x5, 8							
7	fadd.d f7, f7, f1							
7A	fmul.d f7, f10, f1							
8	fsd f7, -8(x5)							
9	subi x2, x1, 1							
10	bne x2, x2, Strt							
End 11	xor x4, x1							
12	fld f1, -8(x5)	MEM R6	WB R6					
13	addi x5, x5, 8	EX R1	MEM R1	WB R1				
14	fadd.d f7, f7, f1	IS	EX1 R3	EX2 R3	EX3 R3	EX4 R3	MEM R3	WB R3

Reservation Stations	Shorthand
ALU-1	R1
ALU-2	R2
FPA-1	R3
FPA-2	R4
Mul	R5
L/S	R6