

INSTRUCTION LIST :

MULTD F4 F0 F8
ADDD F2 F0 F4
ADDD F4 F0 F8

Clock cycle : 0

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	-	-	-	-
1	ADDD F2 F0 F4	-	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
	Add0		False	0	0		
	Add1		False	0	0		
	Add2		False	0	0		
	Mult0		False	0	0		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi										
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

Clock cycle : 1
PC : 0

NEXT FP INSTRUCTION TO BE ISSUED: 'MULTD F4 F0 F8'

Instruction 'MULTD F4 F0 F8' ISSUED at clock 1 in 'Mult0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	-	-	-
1	ADDD F2 F0 F4	-	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
	Add0		False	0	0		
	Add1		False	0	0		
	Add2		False	0	0		
9	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi					Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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Clock cycle : 2

PC : 1

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F2 F0 F4'

Instruction 'ADDD F2 F0 F4' ISSUED at clock 2 in 'Add0'

Instruction 'MULTD F4 F0 F8' STARTED at clock 2 in 'Mult0'

TIMING TABLE						
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB	
0	MULTD F4 F0 F8	1	2	-	-	
1	ADDD F2 F0 F4	2	-	-	-	
2	ADDD F4 F0 F8	-	-	-	-	

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
8	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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Clock cycle : 3

PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE						
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB	
0	MULTD F4 F0 F8	1	2	-	-	
1	ADDD F2 F0 F4	2	-	-	-	
2	ADDD F4 F0 F8	-	-	-	-	

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
7	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

Clock cycle : 4
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
6	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

Clock cycle : 5
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
5	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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Clock cycle : 6
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE						
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write	CDB
0	MULTD F4 F0 F8	1	2	-	-	
1	ADDD F2 F0 F4	2	-	-	-	
2	ADDD F4 F0 F8	-	-	-	-	

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
4	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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Clock cycle : 7
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE					
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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Clock cycle : 8
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

TIMING TABLE					
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station							
Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
2	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
1	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

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NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	-	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
0	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	

Load3 False
Load4 False
Load5 False

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

Clock cycle : 11

PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

Instruction 'MULTD F4 F0 F8' FINISHED at clock 11 in 'Mult0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	11	-
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
2	Add0	ADDD	True	6.0	10.0		Mult0
	Add1		False	0	0		
	Add2		False	0	0		
0	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Mult0					
Value	6.0	0.0	3.5	0.0	10.0	0.0	0.0	0.0	7.8	0.0

Clock cycle : 12

PC : 2

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F0 F8'

Instruction 'MULTD F4 F0 F8' BROADCASTED in CDB at clock 12 with value '46.8'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	11	12
1	ADDD F2 F0 F4	2	-	-	-
2	ADDD F4 F0 F8	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
1	Add0	ADDD	True	6.0	46.8		
	Add1		False	0	0		

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	11	12
1	ADDD F2 F0 F4	2	13	14	-
2	ADDD F4 F0 F8	13	14	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	6.0	46.8		
0	Add1	ADDD	True	6.0	7.8		
	Add2		False	0	0		
	Mult0		False	0	0		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi			Add0		Add1					
Value	6.0	0.0	3.5	0.0	46.8	0.0	0.0	0.0	7.8	0.0

Clock cycle : 15
PC : 3

Instruction 'ADDD F4 F0 F8' FINISHED at clock 15 in 'Add1'
Instruction 'ADDD F2 F0 F4' BROADCASTED in CDB at clock 15 with value '52.8'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	11	12
1	ADDD F2 F0 F4	2	13	14	15
2	ADDD F4 F0 F8	13	14	15	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
	Add0		False	0	0		
0	Add1	ADDD	True	6.0	7.8		
	Add2		False	0	0		
	Mult0		False	0	0		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi					Add1					
Value	6.0	0.0	52.8	0.0	46.8	0.0	0.0	0.0	7.8	0.0

Clock cycle : 16
PC : 3

Instruction 'ADDD F4 F0 F8' BROADCASTED in CDB at clock 16 with value '13.8'

TIMING TABLE					
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	11	12
1	ADDD F2 F0 F4	2	13	14	15
2	ADDD F4 F0 F8	13	14	15	16

Reservation Station						
Time left	Tag	OP	Busy	valueJ	valueK	Qj Qk
	Add0		False	0	0	
	Add1		False	0	0	
	Add2		False	0	0	
	Mult0		False	0	0	
	Mult1		False	0	0	

Load Station			
Time left	Tag	Busy	Address
	Load0	False	
	Load1	False	
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register										
Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi										
Value	6.0	0.0	52.8	0.0	13.8	0.0	0.0	0.0	7.8	0.0