INSTRUCTION LIST :

LD F2 45(R1)
LD F6 34(R2)
ADDD F0 F8 F10
ADDD F4 F10 F10
SUBD F8 F4 F6
ADDD F10 F0 F0

==========

Clock cycle : 0

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	-	-	-	-
1	LD F6 34(R2)	-	-	-	-
2	ADDD F0 F8 F10	-	-	-	-
3	ADDD F4 F10 F10	-	-	-	-
4	SUBD F8 F4 F6	-	-	-	-
5	ADDD F10 F0 F0	-	-	-	-

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: 'LD F2 45(R1)'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	-	-	-
1	LD F6 34(R2)	-	-	-	-
2	ADDD F0 F8 F10	-	-	-	-
3	ADDD F4 F10 F10	-	-	-	-
4	SUBD F8 F4 F6	-	-	-	-
5	ADDD F10 F0 F0	-	-	-	-

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
       2           Load0          True           45+R1
                   Load1          False
                   Load2          False
                   Load3          False
                   Load4          False
                   Load5          False


~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                                                        Register
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
   Name       F0        F1        F2        F3        F4        F5        F6        F7        F8        F9
    Qi                           Load0
  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:  'LD F6 34(R2)'

Instruction 'LD F2 45(R1)' STARTED at clock 2 in 'Load0'
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                                                       TIMING TABLE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
         PC              INSTRUCTION             ISSUED               STARTED              FINISHED            Write CDB
         0                LD F2 45(R1)              1                    2                    -                    -
         1                LD F6 34(R2)              2                    -                    -                    -
         2               ADDD F0 F8 F10             -                    -                    -                    -
         3              ADDD F4 F10 F10             -                    -                    -                    -
         4               SUBD F8 F4 F6              -                    -                    -                    -
         5               ADDD F10 F0 F0             -                    -                    -                    -


~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                                                   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
       1           Load0          True           45+R1
       2           Load1          True           34+R2
                   Load2          False
                   Load3          False
                   Load4          False
                   Load5          False


~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                                                        Register
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
   Name       F0        F1        F2        F3        F4        F5        F6        F7        F8        F9
    Qi                           Load0                                     Load1
  Value      6.0       0.0       3.5       0.0       10.0      0.0       0.0       0.0       7.8       0.0


####################################################################################################################################
####################################################################################################################################


Clock cycle : 3
PC : 2

NEXT FP INSTRUCTION TO BE ISSUED:  'ADDD F0 F8 F10'

Instruction 'ADDD F0 F8 F10' ISSUED at clock 3 in 'Add0'
Instruction 'LD F6 34(R2)' STARTED at clock 3 in 'Load1'
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                                                       TIMING TABLE
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
         PC              INSTRUCTION             ISSUED               STARTED              FINISHED            Write CDB
         0                LD F2 45(R1)              1                    2                    -                    -
         1                LD F6 34(R2)              2                    3                    -                    -
```

2	ADDD F0 F8 F10	3	-	-	-	
3	ADDD F4 F10 F10	-	-	-	-	
4	SUBD F8 F4 F6	-	-	-	-	
5	ADDD F10 F0 F0	-	-	-	-	

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
1	Add0	ADDD	True	7.8	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
0	Load0	True	45+R1
1	Load1	True	34+R2
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi	Add0		Load0				Load1			
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 : 3

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F4 F10 F10'

Instruction 'ADDD F4 F10 F10' ISSUED at clock 4 in 'Add1'
Instruction 'ADDD F0 F8 F10' STARTED at clock 4 in 'Add0'
Instruction 'LD F2 45(R1)' FINISHED at clock 4 in 'Load0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	-
1	LD F6 34(R2)	2	3	-	-
2	ADDD F0 F8 F10	3	4	-	-
3	ADDD F4 F10 F10	4	-	-	-
4	SUBD F8 F4 F6	-	-	-	-
5	ADDD F10 F0 F0	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	7.8	0.0		
1	Add1	ADDD	True	0.0	0.0		
	Add2		False	0	0		
	Mult0		False	0	0		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	True	45+R1
0	Load1	True	34+R2
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9

	Qi	Add0		Load0		Add1		Load1			
	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 : 4

NEXT FP INSTRUCTION TO BE ISSUED: 'SUBD F8 F4 F6'

Instruction 'SUBD F8 F4 F6' ISSUED at clock 5 in 'Add2'
Instruction 'ADDD F4 F10 F10' STARTED at clock 5 in 'Add1'
Instruction 'LD F6 34(R2)' FINISHED at clock 5 in 'Load1'
Instruction 'ADDD F0 F8 F10' FINISHED at clock 5 in 'Add0'
Instruction 'LD F2 45(R1)' BROADCASTED in CDB at clock 5 with value '47.0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	-
2	ADDD F0 F8 F10	3	4	5	-
3	ADDD F4 F10 F10	4	5	-	-
4	SUBD F8 F4 F6	5	-	-	-
5	ADDD F10 F0 F0	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	7.8	0.0		
0	Add1	ADDD	True	0.0	0.0		
2	Add2	SUBD	True	10.0	0.0	Add1	Load1
	Mult0		False	0	0		
	Mult1		False	0	0		

Load Station

Time left	Tag	Busy	Address
	Load0	False	
	Load1	True	34+R2
	Load2	False	
	Load3	False	
	Load4	False	
	Load5	False	

Register

Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi	Add0				Add1		Load1		Add2	
Value	6.0	0.0	47.0	0.0	10.0	0.0	0.0	0.0	7.8	0.0

##
##

Clock cycle : 6
PC : 5

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F10 F0 F0'

Instruction 'ADDD F0 F8 F10' FINISHED at clock 6 in 'Add0'
Instruction 'ADDD F4 F10 F10' FINISHED at clock 6 in 'Add1'
Instruction 'LD F6 34(R2)' BROADCASTED in CDB at clock 6 with value '37.5'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	-
3	ADDD F4 F10 F10	4	5	6	-
4	SUBD F8 F4 F6	5	-	-	-
5	ADDD F10 F0 F0	-	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	7.8	0.0		
0	Add1	ADDD	True	0.0	0.0		
2	Add2	SUBD	True	10.0	37.5	Add1	
	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				Add2	
Value	6.0	0.0	47.0	0.0	10.0	0.0	37.5	0.0	7.8	0.0

Clock cycle : 7
PC : 5

NEXT FP INSTRUCTION TO BE ISSUED: 'ADDD F10 F0 F0'

Instruction 'ADDD F10 F0 F0' ISSUED at clock 7 in 'Add0'
Instruction 'ADDD F4 F10 F10' FINISHED at clock 7 in 'Add1'
Instruction 'ADDD F0 F8 F10' BROADCASTED in CDB at clock 7 with value '7.8'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	7
3	ADDD F4 F10 F10	4	5	6	-
4	SUBD F8 F4 F6	5	-	-	-
5	ADDD F10 F0 F0	7	-	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
1	Add0	ADDD	True	7.8	7.8		
0	Add1	ADDD	True	0.0	0.0		
2	Add2	SUBD	True	10.0	37.5	Add1	
	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				Add2	
Value	7.8	0.0	47.0	0.0	10.0	0.0	37.5	0.0	7.8	0.0

Clock cycle : 8

PC : 6

Instruction 'ADDD F10 F0 F0' STARTED at clock 8 in 'Add0'
Instruction 'ADDD F4 F10 F10' BROADCASTED in CDB at clock 8 with value '0.0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	7
3	ADDD F4 F10 F10	4	5	6	8
4	SUBD F8 F4 F6	5	-	-	-
5	ADDD F10 F0 F0	7	8	-	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	7.8	7.8		
	Add1		False	0	0		
1	Add2	SUBD	True	0.0	37.5		
	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									Add2	
Value	7.8	0.0	47.0	0.0	0.0	0.0	37.5	0.0	7.8	0.0

Clock cycle : 9
PC : 6

Instruction 'SUBD F8 F4 F6' STARTED at clock 9 in 'Add2'
Instruction 'ADDD F10 F0 F0' FINISHED at clock 9 in 'Add0'

TIMING TABLE

PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	7
3	ADDD F4 F10 F10	4	5	6	8
4	SUBD F8 F4 F6	5	9	-	-
5	ADDD F10 F0 F0	7	8	9	-

Reservation Station

Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
0	Add0	ADDD	True	7.8	7.8		
	Add1		False	0	0		
0	Add2	SUBD	True	0.0	37.5		
	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	

Time left	Tag	Busy	Address
	Load5	False	

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Register

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Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi									Add2	
Value	7.8	0.0	47.0	0.0	0.0	0.0	37.5	0.0	7.8	0.0

##
##

Clock cycle : 10
PC : 6

Instruction 'SUBD F8 F4 F6' FINISHED at clock 10 in 'Add2'
Instruction 'ADDD F10 F0 F0' BROADCASTED in CDB at clock 10 with value '15.6'

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TIMING TABLE

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PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	7
3	ADDD F4 F10 F10	4	5	6	8
4	SUBD F8 F4 F6	5	9	10	-
5	ADDD F10 F0 F0	7	8	9	10

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Reservation Station

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Time left	Tag	OP	Busy	valueJ	valueK	Qj	Qk
	Add0		False	0	0		
	Add1		False	0	0		
0	Add2	SUBD	True	0.0	37.5		
	Mult0		False	0	0		
	Mult1		False	0	0		

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Load Station

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

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Register

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Name	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9
Qi									Add2	
Value	7.8	0.0	47.0	0.0	0.0	0.0	37.5	0.0	7.8	0.0

##
##

Clock cycle : 11
PC : 6

Instruction 'SUBD F8 F4 F6' BROADCASTED in CDB at clock 11 with value '-37.5'

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TIMING TABLE

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PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	LD F2 45(R1)	1	2	4	5
1	LD F6 34(R2)	2	3	5	6
2	ADDD F0 F8 F10	3	4	5	7
3	ADDD F4 F10 F10	4	5	6	8
4	SUBD F8 F4 F6	5	9	10	11
5	ADDD F10 F0 F0	7	8	9	10

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Reservation Station

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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	7.8	0.0	47.0	0.0	0.0	0.0	37.5	0.0	-37.5	0.0