INSTRUCTION LIST :

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

Clock cycla · 0

Cl	Loc	K (yc	:L	e	:	0
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				TIMING TABLE					
PC		STRUCTION	ISSUE)	~~~~~~~ STARTED		NISHED	Write CDB	~~~~~
0	MUL	TD F4 F0 F8	-		-		-	-	
1	ADD	DD F2 F0 F4	-		-		-	-	
2	ADD	DD F4 F0 F8	-		-		-	-	
~~~~~~	~~~~~~~		~~~~~~~~~ Re			,~~~~~			~~~~~
	~~~~~~		~~~~~~	~~~~~~~~~	~~~~~~~	,~~~~~	.~~~~~	.~~~~~~~	~~~~~
Time left		OP	Bu:			valueK	Qj	Qk	
	Add0			lse	0	0			
	Add1			lse	0	0			
	Add2			lse	0	0			
	Mult0 Mult1			lse lse	0	0 0			
						-			
		Load Station		~~~~					
Time left		Busy	Add	ress					
	Load0	False							
	Load1	False							
	Load2	False							
	Load3	False							
	Load4	False							
	Load5	False							
	~~~~~~~		~~~~~~	Register	~~~~~~~	,~~~~~~		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~~~~~
~~~~~~				~~~~~~~~~~	~~~~~~~~~	~~~~~~	~~~~~~~	~~~~~~~~	~~~~~~
~~~~~~~ Name Qi	~~~~~~~ F0 F1	F2	F3	F4 F5	F6	F7	F8	F9	

Clock cycle : 1

PC : 0

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

				i TABLE			
PC	INSTRU		ISSUED	STARTED	FINI		Write CDB
0	MULTD F	4 F0 F8	1	-	-		-
1	ADDD F2	F0 F4	-	-	-		-
2	ADDD F4	F0 F8	-	-	-		-
·~~~~~~~		.~~~~~~~~~	Reservatio			~~~~~~	
~~~~~~~~ Time left	~~~~~~ Tag	0P	 Busy	valueJ	valueK	~~~~~~ Qj	0k
	Add0		False	0	0	cs	·
	Add1		False	0	0		
	Add2		False	0	0		
5	Mult0	MULTD	True	6.0	7.8		
	Mult1		False	0	0		
	Load	Station					
~~~~~~~~ Time left		Busy	Address				
	Load0	False					
	Load1	False					
	Load2	False					
	Load3	False					
	Load4	False					
	Load5	False					

~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~~	~~~~~~~
					Regi	.ster					
~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~	~~~~~~~	~~~~~~
Name	FØ	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	

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						
PC	INST	~~~~~~~~ RUCTION		~~~~~~~ SSUED	STARTE		FIN	 ISHED		te CDB
0	MULTD	F4 F0 F8		1	2			-		-
1		F2 F0 F4		2	-			-		-
2	ADDD	F4 F0 F8		-	-			-		-
~~~~~~		~~~~~~~~	~~~~	~~~~~~ Reservatio	~~~~~~ n Station	~~~~	~~~~~~~	~~~~~~~	~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Time left	Tag	~~~~~~ OP	~~~~	Busy	valueJ	~~~~	valueK	~~~~~~ Qj	~~~~~	Qk
2	Add0	ADDD		True	6.0		10.0	£J		Mult0
	Add1			False	0		0			
	Add2			False	0		0			
4	Mult0	MULTD		True	6.0		7.8			
	Mult1			False	0		0			
~~~~~	Lo	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
~~~~~~ Time left	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	 Busy	~~~~	Address						
	Load0	False								
	Load1	False								
	Load2	False								
	Load3	False								
	Load4	False								
	Load5	False								
~~~~~~	~~~~~~~~	~~~~~~~	~~~~	~~~~~~~~	~~~~~~~	~~~~	~~~~~~~	~~~~~~	~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
~~~~~~	~~~~~~~~~~	~~~~~~~~	~~~~~	Regi	ster ~~~~~~	.~~~~	~~~~~~~	~~~~~~	~~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Name	F0 F1	F2	F3	F4	F5	F6	F7	F8	F9	
Qi		Add0		Mult0				7.0	0.6	
/alue	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 F4 F0 F8'

~~~~~~~~	~~~~~~~					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
			LIMIN	G TABLE		
						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
PC	INSTRU	JCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F	4 F0 F8	1	2	-	-
1	ADDD F2	2 F0 F4	2	-	-	-
2	ADDD F4	F0 F8	-	-	-	-
~~~~~~~~~	~~~~~~~	.~~~~~~~~	~~~~~~~~~	~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
			Reservatio	on 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	
3	Mult0	MIII TD	Tnuo	6.0	7.8	
		MULTD	True	٥.٥	7.0	

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

~~~~~~~	~~~~~~~	.~~~~~~~	.~~~~~~~	~~~~~~	~~~~~~~~	~~~~~~~	~~~~~~~~	~~~~~~~~	~~~~~~~	~~~~~~~~	~~~~~~~~
					Regi	.ster					
~~~~~~~	~~~~~~	~~~~~~	~~~~~~~	~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~	~~~~~~~~	~~~~~~~
Name	FØ	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				
~~~~~ PC	INSTR	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ISSUED	STARTED		~~~~~~~ ISHED	Write CDB
0		F4 F0 F8	1	2		-	-
1		2 F0 F4	2	-		-	-
2	ADDD F	4 F0 F8	-	-		-	-
~~~~~		~~~~~~~~~	Reservatio			~~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
~~~~~~ Time left		~~~~~~~ OP	Busy	valueJ	valueK	~~~~~~ Qj	
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		
~~~~~	Loa	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~				
~~~~~~~	~~~~~~~~~~~~~	~~~~~~~~					
Time left	: Tag	Busy	Address				
Time left	: Tag Load0	Busy False	Address				
Time left	•		Address				
Time left	Load0	False	Address				
Time left	Load0 Load1	False False False False	Address				
Time left	Load0 Load1 Load2	False False False	Address				
Time left	Load0 Load1 Load2 Load3	False False False False	Address				
~~~~~~	Load0 Load1 Load2 Load3 Load4 Load5	False False False False False False	~~~~~~~~ Regi	ster	~~~~~~~~	~~~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
~~~~~~	Load0 Load1 Load2 Load3 Load4	False False False False False False	~~~~~~~~ Regi	ster		~~~~~~~ ~~~~~~~~ F8	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Clock cycle : 5

PC : 2

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

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
		TIMIN	G 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	-	-	-	-

	~~~~~~~~~~~~			Reservatio		~~~~~~~				
Time left		OP		Busy	valueJ		alueK	Qj		Qk
2	Add0	ADDD		True	6.0	1	10.0			Mult0
	Add1			False	0		0			
	Add2			False	0		0			
1	Mult0	MULTD		True	6.0		7.8			
	Mult1			False	0		0			
~~~~~	~~~~~~~~ Lo	ad Station	~~~~	~~~~~						
~~~~~~ Time left	~~~~~~~~ Tag	Busy		Address						
	Load0	False								
	Load1	False								
	Load2	False								
	Load3	False								
	Load4	False								
	Load5	False								
,~~~~~~~	~~~~~~~~~		~~~~~	~~~~~~ Regi		~~~~~~	.~~~~~	~~~~~~	~~~~~~	~~~~~
	~~~~~~~		~~~~~	•	~~~~~~~	~~~~~~	~~~~~	~~~~~~	~~~~~~	~~~~~
~~~~~~	F0 F1	F2	F3	F4	F5	F6	F7	F8	F9	
Name Qi	FØ FI	Add0		Mult0						

Clock cycle : 6

PC : 2

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

				NG TABLE				
~~~~~~ PC	INST	RUCTION	ISSUED	STARTED		FINISHED	Wri	te CDB
0	MULTD	F4 F0 F8	1	2		-		-
1	ADDD I	-2 F0 F4	2	-		-		-
2	ADDD I	F4 F0 F8	-	-		-		-
~~~~~	,~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			on Station				~~~~~~~
~~~~~~ Time left	Tag	OP	Busy	valueJ	valuek		~~~~~	~~~~~~ Qk
2	Addø	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			
······································		ad Station						
Time left		Busy	Address					
	Load0	False						
	Load1	False						
	Load2	False						
	Load3	False						
	Load4	False						
	Load5	False						
~~~~~				 gister			.~~~~~	~~~~~~~
Name Qi	F0 F1	F2 Add0	F3 F4 Mult0	F5	F6 F	7 F8	F9	~~~~~~
/alue	6.0 0.0		0.0 10.0	0.0	0.0 0.	.0 7.8	0.0	

Clock cycle : 7 PC : 2

			TIMIN	IG TABLE					
PC 0 1 2	MULTD ADDD F	UCTION F4 F0 F8 2 F0 F4 4 F0 F8	ISSUED 1 2 -	STARTE 2 - -	ED		ISHED 7 -	Write CDB	~~~~
~~~~~~~	~~~~~~~~~~	.~~~~~~~~		on Station	~~~~	~~~~~~~	~~~~~~		~~~~
Time left 2	Tag Add0 Add1	OP ADDD	Busy True False False	valueJ 6.0 0	.~~~~	valueK 10.0 0	~~~~~~ Qj	Qk Mult0	
0	Add2 Mult0 Mult1			0 6.0 0		0 7.8 0			
~~~~~~		d Station							
Time left	Tag Load0 Load1	Busy False False	Address						
	Load2 Load3 Load4 Load5	False False False False							
		.~~~~~~~		gister					.~~~~
Name Qi Value	F0 F1 6.0 0.0	F2 Add0 3.5	F3 F4 Mult0 0.0 10.0	F5 0.0	F6 0.0	F7 0.0	F8 7.8	F9 0.0	
######################################	***************************************	***********	######################################						
	'MULTD F4 F0 F8'		in CDB at clock 8	with value '		~~~~~~~	~~~~~~		~~~~
~~~~~~	~~~~~~~~~~~	.~~~~~~~	TIMIN	IG TABLE	~~~~	~~~~~~~	~~~~~~~	.~~~~~~~~~	~~~~
PC 0 1 2	MULTD ADDD F	UCTION F4 F0 F8 2 F0 F4 4 F0 F8	ISSUED 1 2 -	STARTE 2 - -	Đ		ISHED 7 - -	Write CDB 8 - -	
~~~~~~	·~~~~~~~~	.~~~~~~~~		on Station	~~~~	~~~~~~~	~~~~~~	.~~~~~~~~~	~~~~
Time left	Tag Add0	OP ADDD	Busy True	valueJ 6.0	~~~~	valueK 46.8	~~~~~~ Qj	Qk	~~~~

0		4 F0 F8	1	2		7	8
2	ADDD F2 ADDD F4		-	-		-	- -
_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
~~~~~~			Reservatio		~~~~~~~	~~~~~~~~~	
~~~~~~~ Time left	~~~~~~~ Tag	-~~~~~~ OP	 Busy	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	valueK	~~~~~~~~ Qj	 Qk
1	Add0	ADDD	True	6.0	46.8		·
	Add1		False	0	0		
	Add2		False	0	0		
	Mult0		False	0	0		
	Mult1		False	0	0		
		l Station					
~~~~~~~~ Time left	~~~~~~~~ Tag	Busy	Address				
	Load0	False					
	Load1	False					
	Load2	False					
	Load3	False					
	Load4	False					
	Load5	False					
			.~~~~~~~~~~				

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

Clock cycle : 9

PC : 2

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

Instruction 'ADDD F4 F0 F8' ISSUED at clock 9 in 'Add1' Instruction 'ADDD F2 F0 F4' STARTED at clock 9 in 'Add0'

					TIMING						
PC 0 1 2	.~~~~	MULTD ADDD F	UCTION F4 F0 F8 2 F0 F4 4 F0 F8	IS	SUED 1 2	START 2 9	ED		TSHED 7 -		e CDB 8 -
~~~~~	~~~~	,~~~~~~~~~	~~~~~~	~~~~~	~~~~~~ Reservatio	~~~~~~ n Station	~~~~	~~~~~~	~~~~~~	,~~~~~~	~~~~~~~~
Time left 0 1		Tag Add0 Add1 Add2 Mult0 Mult1	OP ADDD ADDD	~~~~	Busy True True False False False	valueJ 6.0 6.0 0 0	~~~~	valueK 46.8 7.8 0 0	Qj	~~~~~	Qk
~~~~~	.~~~~		~~~~~~~~ d Station	~~~~~	~~~~~						
Time left		Tag Load0 Load1 Load2 Load3 Load4 Load5	Busy False False False False False		Address						
~~~~~~	~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	~~~~~~~	~~~~~	~~~~~~ Regi	ster	~~~~~	,~~~~~~~~~	~~~~~~		~~~~~~~
Name Qi Value	F0 6.0	F1 0.0	F2 Add0 3.5	F3	F4 Add1 46.8	F5	F6 0.0	F7	F8	F9 0.0	~~~~~~~~~

Clock cycle : 10

PC : 3

Instruction 'ADDD F4 F0 F8' STARTED at clock 10 in 'Add1' Instruction 'ADDD F2 F0 F4' FINISHED at clock 10 in 'Add0'

			TIMING	3 TABLE		
~~~~~~~		~~~~~~~	~~~~~~~~~		~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
PC	INSTRU	CTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F	4 F0 F8	1	2	7	8
1	ADDD F2	F0 F4	2	9	10	-
2	ADDD F4	F0 F8	9	10	-	-
~~~~~~	.~~~~~~	~~~~~~~			~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~~~~	~~~~~~~~~	~~~~~~~~	Reservatio		~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Time left	Tag	OP	Busy	valueJ	valueK	Qj Qk
	Add0	ADDD	True	6.0	46.8	
0			True	6.0	7.8	
0 0	Add1	ADDD	ii ac			
0 0	Add1 Add2	ADDD	False	0	0	
0 0		ADDD			0 0	
0 0	Add2 Mult0	ADDD	False False	0	0	
·	Add2 Mult0 Mult1		False	0		

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

~~~~~~~	$v_0$												
	Register												
~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~												
Name	FØ	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 : 11

PC : 3

Instruction 'ADDD F4 F0 F8' FINISHED at clock 11 in 'Add1'

Instruction 'ADDD F2 F0 F4' BROADCASTED in CDB at clock 11 with value '52.8'

				IG TABLE			
PC 0 1 2	MULTD ADDD F	UCTION F4 F0 F8 2 F0 F4 4 F0 F8	ISSUED 1 2 9	STARTED 2 9 10		~~~~~~~ ISHED 7 10 11	Write CDB 8 11
~~~~~~		~~~~~~~	~~~~~~~~ Reservati	on Station	,~~~~~~~	~~~~~~	~~~~~~~~~~~~~~
rime left 0	Tag Add0 Add1 Add2 Mult0 Mult1	OP ADDD	Busy False True False False False	valueJ 0 6.0 0 0	valueK 0 7.8 0 0	Qj	Qk
.~~~~~		~~~~~~~ d Station	~~~~~~~				
Time left	Tag Load0 Load1 Load2 Load3 Load4 Load5	Busy False False False False False	Address				
·~~~~~		~~~~~~~~	Reg	 ister		~~~~~~	~~~~~~~~~~~
Name Qi alue	F0 F1 6.0 0.0	F2	F3 F4 Add1 0.0 46.8		6 F7	F8	F9 0.0

Clock cycle : 12

PC : 3

Instruction 'ADDD F4 F0 F8' BROADCASTED in CDB at clock 12 with value '13.8'

~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
		ITMTI	IG TABLE		
~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~	~~~~~~~~~~~~	~~~~~~~~~~~~~~~~	
PC	INSTRUCTION	ISSUED	STARTED	FINISHED	Write CDB
0	MULTD F4 F0 F8	1	2	7	8
1	ADDD F2 F0 F4	2	9	10	11
2	ADDD F4 F0 F8	9	10	11	12
~~~~~~~~~~	~~~~~~~~~~~~~~~~~~	~~~~~~~	~~~~~~~~	~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
		Reservati	on Station		
~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~	~~~~~~~~~~~~	~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Time left	Tag OP	Busy	valueJ	valueK Q	j 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		

~~~~~~~	$n_{n}$												
	Register												
~~~~~~~	~~~~~~	~~~~~~~	~~~~~~	~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~	~~~~~~~		
Name	FØ	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			