Name! MD. ABU AMMAR

Id: 1821944642

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Francis = 0.4

Faisk = 0.3

and SI = = 4; S2 = = 94

we Know from Ambahls law,

Speed up z (1-Framony-Fjink)+ (Framony)+ (Fjink)

(1-Framony-Fjink)+ (Si)

= 2.17

AN)

Aws: 2 2 ISCNOL NOW Given, start 198 Out north frequency of Load tan Store, NO EN 519= 1334. 510+007 NOUM 199 fs = 33.1. access of memory Required instruction for Load and stone for this program = 0. 33 × 100 = 33 and for Storre = 0.33 × 100 = 33 033×1+0.33×1 Aug epoI= 0.33 x PH 0.33 × 101= @ 66.6 For 2%. eache miss 0.33×0.98+0 AVD EPIZ-Avg CPI2= 0.33x0.98x3 + 0.33 x0.02 x103 = 1.65

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So, Avg CPIZ is much lower than Aug ept that's why program with chacke on will run much faster than previous on. nene Avg CPI2 LL Avg CPI ES = 10 01 × 25 × 0 = morgood with AW and for store = 0.33 × 100 = 3 B AND CHI = 0.33 × 1 + 0.33 × 1! YND G DIOT X EE. O + HX JEE. O - 23 X JOIZ DO CH! For ... 2.1. idehe : misso 0.3\$x0.9} AVD 66ID - 6200 Avg CPI2= 0.33x0.38x3 + 0.33 x0 02 MD3 1.65

								A	め:-	3									4)	
Instruction /Time steps	. 1	2	3	4	5	6	7	.8	9	10	u-	12	13	114	12	16					
ADD R3, R1, R2	F	D	E	W				٠,													
5 UB RG, R2, R3		F	,D		VE	W		T				-		-							
AND M, , R5, 3			F	7	D	E	w	6		. , /								H		-	
ADD RI, RG, MI		-			F	D	1	VE.				V		1	-	1		3			
JMP NISU1						F		D	E	W											
NSU2:00 P2, R4, R7		0						F	D	E	W										10
\$ 5 UB R5, R3, R4		0		0	0		0	7	F	D	E	In									3
ADD RO, R1, R10		0	-		C J		0		1		D	E	0	3	000						
NSU1: LOAD RG, M2											F		0	=0,	5			10	T	Service Management	
SUB R2, R1, R6		1	1				Anna anna				Control Control			0 1	= 1		-	-	3	to the state of th	
JMPNSU2		-			116	100		7		9	And the second second		7	FJ	5	Eli	1	1.5	0	and distribution and the state of the state	Wilderhouse regelescopes and an
		and a second	and the second	and the same	mo de serviciones de						L		-€-l	0	1 5		-	3	90		

Ans:	4
/ 1	

For compiler A,

instr.	ei	1 epi
div	1000	4
add	1060	1
Toad	1000	6
zub	1006	2

For compiler B,

instre.	ei -	CPII
add	3000	
9,14	1000	4
SWD	1000	2
load	1000	6

PAPERTECH

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Avg ePIA = 1000x4 + 1000x1 + 1000x6 + 1000 x2

OSI = - 01×005 = 509 TM

AM

Avg ePIB = 3000×1+1000×4+1000×2+1000×6

= 2.5

TA = 4000 × 3.25 × 300 × 1061

= 4.3 × 10 See = Myor

TB= 6000×2.5× 300×106

= 5×10-5 sec.

$$MIPS_B = \frac{300 \times 106}{2.5 \times 106} = 120$$

Socite expect + px cool + 1 xocce = g [7] ova

GINCY,

TB- 6000x 2.5x 200x106

- 5×10 5 ccc.

$$= \frac{2.5 \times 800 \times 10^6}{100 \times 10^6} = 20$$

and $Avg \ CPIm2 = \frac{2 \times 1000 \times 10^{16}}{125 \times 10^{6}} = 16$

PAPERTECH

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old new

twit.	FMI	tm 20	m1	M2	MAPINO	(PIna
Add	0.4	0.6	20	16	Si	2
MUL	9.1	0.08	20	16	20	25
emp	0.2	0.12	20	16	20	16
SuB,	10.3	0.2	20	76	(20	16

AND GLIME = ISENIOR