EE224: Course Project Date: //

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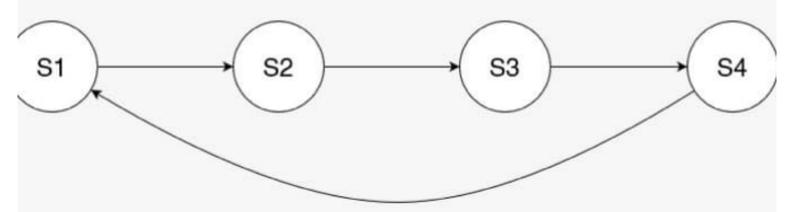
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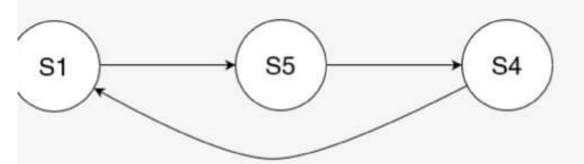
Major Components used in over Data Path

- 1) Memory
- 2) ALU
- 3) Sorial Extender
- 4) Temporary Registers
- 5) Register File
- 6) Multiplexer
- 7) Decoder
- 8) Universal Shiftor
- 9) Flag registers
- 10) Instruction Register.

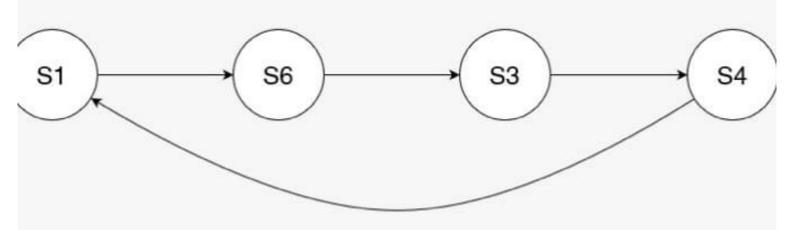
ALU



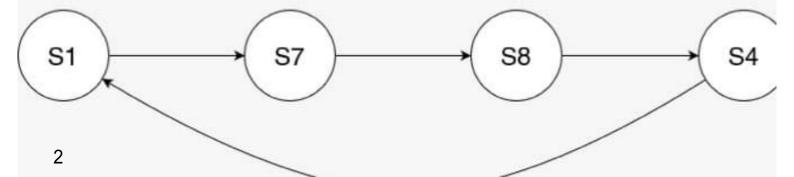
J- Type



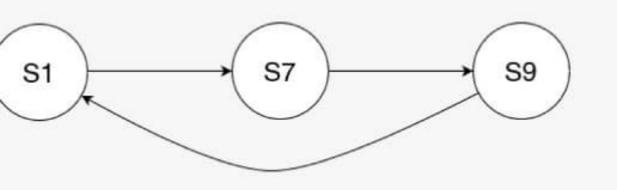
ADI



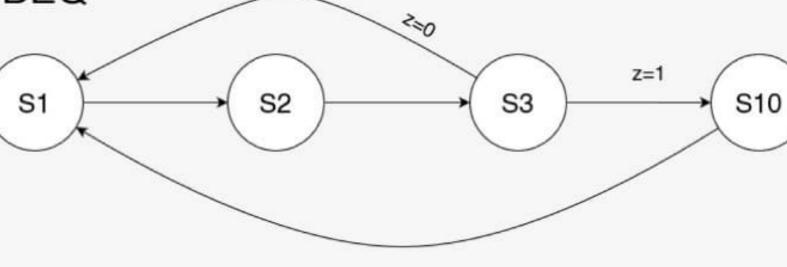
LW



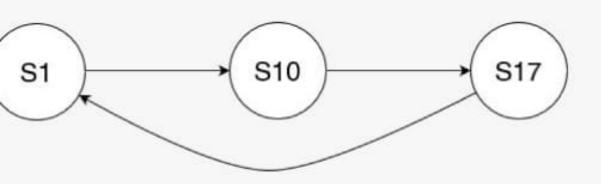
SW



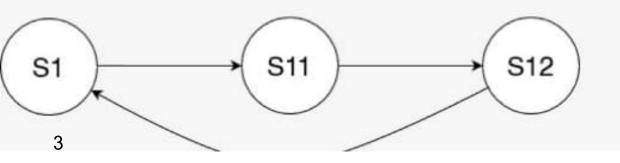




JAL



JLR



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-> State description:

State 1: Read from memory and increment PC

State 2: Read Instruction (Rtype)

State 3: Execute specific ALU operation

State 4: Update Result

State 5: Read Instruction (LHI/LLI)

State 6: Read Instruction (ADI type)

State 7: Read Instruction (La, san type)

State 8: Read from memory

State 9: Store Memory

State 10: Branch To DC + 9mm + 2

State 11: PC to Reg A.

State 12: Branch to Reg B

-> State functions

State 1:

"III" --- A AT RF_CU

01 --> Mem_Add Mem_Read

01 --> ALU_A IR_CU

Increment 1 -- ALU-B R_cul

ALU_C - D3_T COP

"III" - A T - ATS_ W

Mem-Data - IR

D1 - Tset

State 2: IR 113		and the state of t	The property of the second		
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State 4: Applied and 2: Patrice State 4: Applied of 39: Le state Ty ARF_A3 State 5: Applied RF_WARE Ty ARF_A3 State 5: Applied Applied RF_WARE IRgo Shifter_En Shifter_Out Applied Appl					
State 4: State 4: Apple of 29:41 state T3 — RF203 donord RF2 will T4 — RF-A3 State 5: ZNOHOW Shifter_En Shifter_Out — T3 : 1 state W TR 11:9 — T4 A - 111" TR 9:11 — A12A - 10T2-cul TR 8:6 — T4 A - 111" TR 0:5 — SE6_IN MARKET MARK					
State 4: Ty -> RF_03 Americ RF_wall Ty -> RF_A3 State 5: ZOCHOWN State IR80 Shifter_En Shifter_out -> Ty Lister 6: A USA Lister List					
State 5: Transport RF_Work RF_Work Transport RF_Work Transport RF_Work		State 4: Appl of 29 :11 state			
State 5: IRg:0 > Shifter_In Shifter_Out > T3 LD IR H:g > T4 A "III" State 6: A USA AND ADDITION TR g:H > AILA A LOTTE CAL OI					
State 5: IRgo Shifter_In Shifter_Out Tg List Ing Ty A State 6: A USA TR gold TR gold The Tr and TR gold Tr and T					
$\begin{array}{c} \text{IR8:0} \rightarrow \text{Shifter} - \text{En} \\ \text{Shifter} - \text{Out} \rightarrow \text{Tg} \\ \text{LD} - \text{TRH:g} \rightarrow \text{Ty} \text{A} \rightarrow \text{III}'' \\ \text{State 6:} \text{A-UJA} \leftarrow \text{LO} \\ \text{State 6:} \text{A-UJA} \leftarrow \text{LO} \\ \text{D1} \rightarrow \text{T1} \rightarrow \text{A1} \rightarrow $					
TR8:0 Shifter_In Shifter_Out \rightarrow Tg Land TR :g \rightarrow Tu In State 6: A UJA LATICAL OL TR8:11 \rightarrow All In TR8:6 \rightarrow Tu A TR0:5 \rightarrow SE6_IN STEADUT \rightarrow T2 In STEADUT \rightarrow		State 5:			
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State 6: A UJA LO IR g: -> AIJA LO IR g: -> TIDO LO IR g: 6 -> Ty A IR 0:5 -> SE6_IN SPARUT -> T2_I					
State 6: IR g: II -> AI - AI - AI - AI - AI - AI - AI		long a mem Bolot Mem Regal			
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TR 8:6 -> Ty A TR 0:5 -> SE6-IN SEGUT -> T2		9001 - T100 - T100			
FROIS -> SEG_IN SEGUT -> T2		WIRRS TIA			
SEGUT -> T2					
	5		-		

