What happens when 'LDA s' is run?

1

What happens when 'STA s' is run?

2

What happens when 'ADD s' is run?

3

What happens when 'SUB s' is run?

4

What happens when 'JMP s' is run?

5

What happens when 'JGE s' is run?

6

What happens when 'JNE s' is run?

7

What three steps occur during the fetch phase?

8

ACC = [s]

1

[s] = ACC

2

PC = s

3

ACC += [s]

4

PC = s

5

if ACC != 0 then PC = s

6

ACC -= [s]

7

if ACC ¿= 0 then PC = s

8

1. *Use PC as address to read memory*
2. *Save result of read in CPU*
3. *Increment PCI read*

What control signals do all registers need?

9

What control signal does a multiplexer need?

10

What control signals does the memory need?

11

Which 3 signals control the ALU?

12

What is a process?

13

What is the address space?

14

What is a thread?

15

What is multi-threading?

16

A signal to select an input

10

An enable signal

9

add, sub & byp

12

Ren (read enable) and Wen (write enable)

11

All memory locations the process can use.

14

A program in execution, the thread + address space.

13

This is where we have multiple threads within the same process

16

A sequence of instructions that are obeyed.

15

How do we make programs think they have sole use of memory?

17

What are the three different approaches to engineering an OS?

18

What are the three process states?

19

In the diagram, what is happening at each stage?

20

What is a PCB table?

21

In scheduling, what do the following mean?

1. *CPU burst*
2. *I/O burst*
3. *CPU bound*
4. *I/O bound*

22

What is a processes turnaround time?

23

What is a processes waiting time?

24

Monolithic, layered and micro-kernels.

18

*Use **relocation**, where we swap a program out of memory and later swap it back in.*

17

1. *Process need to wait for I/O or event.*
2. *Process forcibly preempted - **interrupt / relinquish CPU / time-slice expired**.*
3. *Scheduler selects process to run.*
4. *I/O or event occurs.*

20

Running, ready, blocked

19

1. *Process executing on CPU*
2. *Process blocked, waiting for I/O*
3. *Long CPU bursts*
4. *Short CPU bursts*

22

Process control block, it contains all of the information needed about processes.

21

The time that the process waits to run.

24

The time from a process being submitted to it getting completed.

23