

CS[45]71 Quiz

1. Suppose the following program is run.

```
int a = 67;
int b;

int main()
{
    int c;
    int *d;

    d = malloc(sizeof(int));
    printf("%lx %lx %lx %lx\n", &a, &b, &c, d);
}
```

Which of the following is the most likely output?

- (a) 7ffc5ea16d64 404038 c39260 404040
- (b) c39260 404038 404040 7ffc5ea16d64
- (c) 7ffc5ea16d64 c39260 404038 404040
- (d) 404040 404038 7ffc5ea16d64 c39260
- (e) 404038 404040 7ffc5ea16d64 c39260

Why?

3. For the following list of processes, fill in the Gantt columns for each of the three scheduling methods.

- FIFO = First in first out
- RR = Round Robin
- STR = Shortest (Actual) Time Remaining
- LTU = Least (Actual) Time Used

In case of ties when using any of the algorithms, choose the first process on the list, i.e., the first to arrive. If no process is running during a time period, leave the cell blank. Note: processes arrive at the beginning of a time period. So, for example, process A will be ready to run in time slot zero. Arriving processes have priority over processes that just used the CPU.

Process Name	Arrival Time	Running Time
A	0	2
B	1	6
C	3	4
D	3	1
E	5	4
F	6	1

Time	FIFO	RR	STR	LTU
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

4. What system call creates new processes? What does the value returned by this system call tell you?
5. What is the type returned by `open(2)`?
6. What is the value returned by `read(2)`?
7. What is the value returned by `write(2)`?
8. What are the three parameters to `write(2)`?