

1. Consider four processes with the following starting and ending times:

Process	Start time	End time
A	5	7
B	2	4
C	3	6
D	1	8

For each pair of processes, indicate whether they run concurrently (y) or not (n):

Process pair	Concurrent?
AB	
AC	
AD	
BC	
BD	
CD	

2. Specify which kind of exception will occur in the given scenario, and point out whether it's asynchronous or synchronous.

- a) A page fault
- b) You're chatting with somebody with qq
- c) You're running a command "kill -9 <pid>" in your shell
- d) The memory of your pc corrupted

3. Write the assembly code of the code segment below.

```
int main() {  
    kill(97859, 9);  
    exit(0);  
}
```

4. What kinds of states does a process have? And how does it change among them? Please describe in a particular way.