

- [CPSC 275: Introduction to Computer Systems](#)

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Fall 2025

- [Syllabus](#)
- [Schedule](#)
- [Resources](#)
- [Upload](#)
- [Solution](#)

# Homework 32

NOTE: You are not required to hand in the following exercises, but you are strongly encouraged to complete them to strengthen your understanding of the concepts covered in class.

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

Process	Start time	End time
A	0	2
B	1	4
C	3	5

For each pair of processes, indicate whether they run concurrently or not:

Process pair	Concurrent?
AB	
AC	
BC	

2. Consider the following program:

```
int main()
{
    int x = 1;

    if (fork() == 0)
        printf("printf1: x=%d\n", ++x);
    printf("printf2: x=%d\n", --x);
    exit(0);
}
```

- A. What is the output of the child process?
- B. What is the output of the parent process?

3. Consider the following program:

```
int main(void)
{
    pid_t pid;

    if (fork() == 0) {
        if (fork() == 0) {
            printf("9");
            exit(1);
        }
        else
            printf("5");
    }
    else {
        if ((pid = wait(NULL)) > 0)
            printf("3");
    }
    printf("0");

    return 0;
}
```

For each of the following strings, circle whether or not this string is a possible output of the program.

- A. 59300
- B. 53090
- C. 39500
- D. 50930
- E. 93050

- **Welcome: Sean**

- [LogOut](#)

