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CSC315

February 14, 2023

H.W #1

1.What are the possible outputs when the following program is run?

```c
1  #include <stdio.h>
2  #include <stdlib.h> //calloc()
3  #include <unistd.h>//fork()
4  int main()
5  {
6      int* stuff = (int*)calloc(1, sizeof(int));
7      pid_t fork_ret = fork();
8      if (fork_ret == 0){
9          *stuff = 6;
10     }
11     else{
12         *stuff = 5;
13     }
14     printf("The last digit of pi is %d\n", *stuff);
15     return 0;
16 }
```

(5 points) Using the process path tree list all the possible outputs.
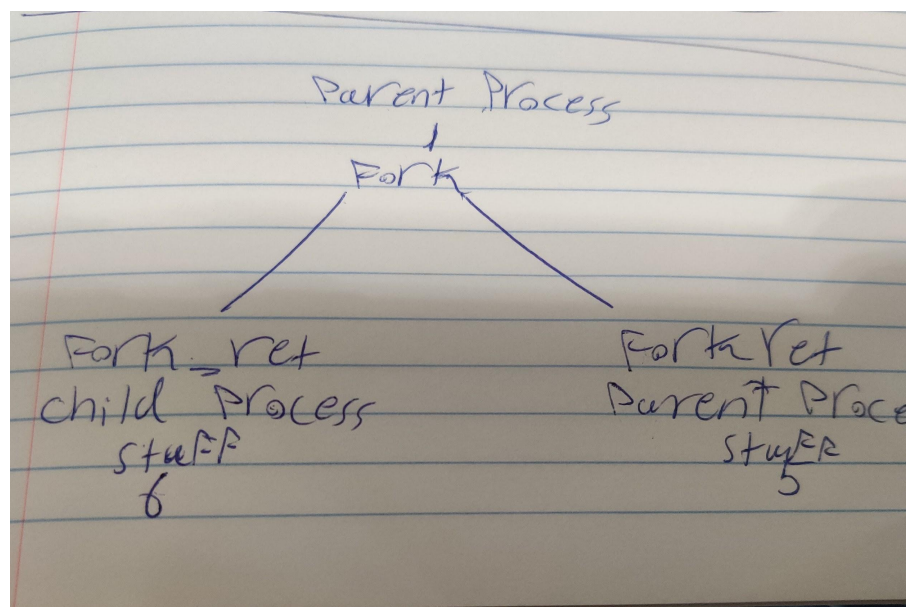
There are 6 outputs:
Assuming the child process is run initially, the output produced will be 6 or

or

5 if the parent process is executed first

or 5,5 or 6,6 or 5,6 or 6,5

Parent Process

Fork

Fork_ret
child Process
stuff
6

Fork ret
Parent Proce
stuff
5

2.

2.What are the possible outputs when the following program is run?(5 points)

```c
1  #include <stdio.h>
2  #include <stdlib.h> //calloc()
3  #include <unistd.h>//fork()
4  int main()
5  {
6      pid_t fork_ret = fork();
7      int* stuff = (int*)calloc(1, sizeof(int));
8      if (fork_ret == 0){
9          *stuff = 6;
10     }
11     else{
12         *stuff = 5;
13     }
14     printf("The last digit of pi is %d\n", *stuff);
15     return 0;
16 }
17
```

Using the process path tree list all the possible outputs.

there are 4 outputs 5 or 6 or 6,5 or 5,6