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BS SE 5A

Quiz 1

Course: Operating Systems

Course Code: CS 2006

Section: BSE-5A

Total Marks: 10

Name: Janyab Kamran Sami

RollNo: 221-2505

Question 1: [5 Marks]

Write a C program where the parent process creates three child processes using fork(). Each child process should print its own PID and exit with a different exit code (e.g., 1, 2, 3). The parent process should wait for each child to terminate and print the exit status of each child.

(Hint: you can use WEXITSTATUS(status) macro to get exit status)

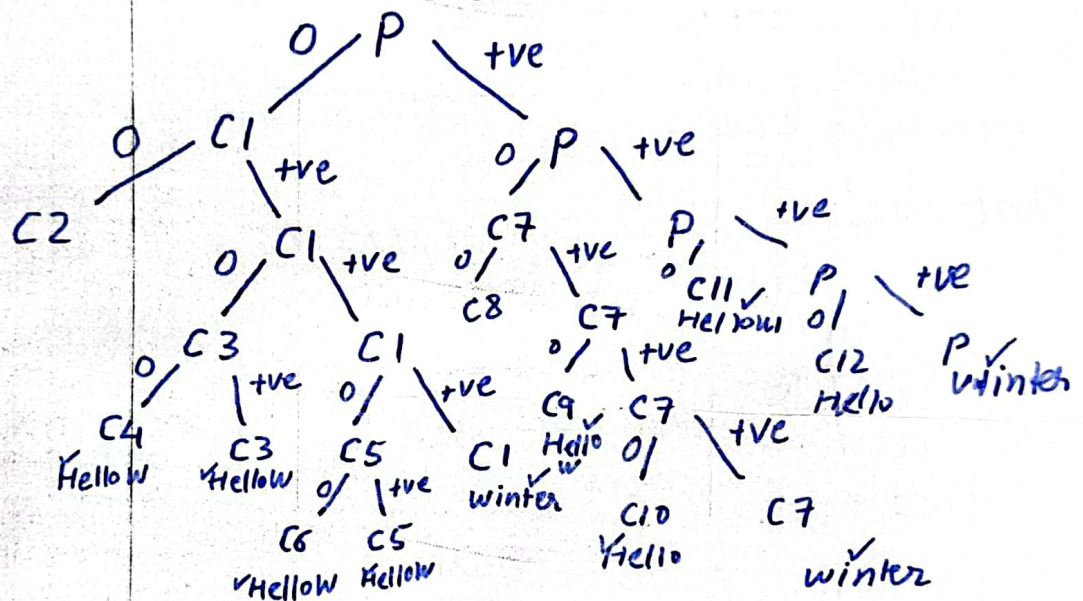
```
#include <stdio.h>
#include <unistd.h>
#include <types/sys.h>
int main() {
    int id1 = fork(); int id2 = fork(); int id3 = fork();
    wait(); wait(); wait();
    cout << "Process 1" << id1 << endl;
    cout << "Process 2" << id2 << endl;
    cout << "Process 3" << id3 << endl;
    int status = wexit status(& status)
```

①

Question 2: [2.5+2.5 Marks] Consider the following code:

```
if ((fork() && fork()) || fork())
{ if( fork() && fork())
{ printf ("Winter is coming"); }
else
{ fork();
printf ("Hello World"); }
}
```

How many times "winter is coming" and "Hello World" will be printed on the screen?
Also draw the Process Tree of the given program.



3 times "winter is coming"
8 times "Hello world"

3.5