Huỳnh Tấn Dương

3122410061

Hoàn thành 4/4

Bài 1/

```c
#include<stdio.h>
void main(){
        while(1){
                printf("meow meow\n");
        }
}
```

```
meow meow
meow meow
meow meow
meow meow
meow meow
meow meow
meow meow
meow meow
meow m^Z
[1]+  Stopped                 ./bai1.out
duong@ubuntu:~/Desktop/baitap/lab4/bai1$ ps -l
F S   UID    PID   PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
0 S  1000   2792   2782  0  80   0 -  6721 wait   pts/3    00:00:00 bash
0 T  1000   2811   2792  1  80   0 -  1052 signal pts/3    00:00:00 bai1.out
0 R  1000   2812   2792  0  80   0 -  3557 -      pts/3    00:00:00 ps
duong@ubuntu:~/Desktop/baitap/lab4/bai1$ kill -9 2811
duong@ubuntu:~/Desktop/baitap/lab4/bai1$ ps -l
F S   UID    PID   PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
0 S  1000   2792   2782  0  80   0 -  6721 wait   pts/3    00:00:00 bash
0 R  1000   2813   2792  0  80   0 -  3557 -      pts/3    00:00:00 ps
[1]+  Killed                  ./bai1.out
duong@ubuntu:~/Desktop/baitap/lab4/bai1$
```

Bài 2/

```c
#include<stdio.h>
#include<unistd.h>
#include<stdlib.h>
#include<sys/wait.h>
#include<sys/types.h>
#include<errno.h>
void main(){
            pid_t pid;
            pid =fork();
        if(fork>0){
            printf("hi %d\n",getpid());
            sleep(10);
            wait(NULL);
            exit(0);
        }
        else if(pid==0){
            printf("hello %d\n",getpid());
            exit(0);


        }
        else{
            printf("error\n");
        }
}
```

```
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ gcc -c bai2.c
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ gcc -o bai2.out bai2.o
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ ./bai2.out
hi 2846
hi 2847
^Z
[1]+  Stopped                 ./bai2.out
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ ps -l
\F S   UID    PID   PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
0 S   1000   2792   2782  0  80   0 -  6721 wait   pts/3    00:00:00 bash
0 T   1000   2846   2792  0  80   0 -  1052 signal pts/3    00:00:00 bai2.out
1 T   1000   2847   2846  0  80   0 -  1052 signal pts/3    00:00:00 bai2.out
0 R   1000   2848   2792  0  80   0 -  3557 -      pts/3    00:00:00 ps
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ ps -l -y
S   UID    PID   PPID  C PRI  NI   RSS   SZ WCHAN  TTY          TIME CMD
S   1000   2792   2782  0  80   0  5372  6721 wait   pts/3    00:00:00 bash
T   1000   2846   2792  0  80   0   624  1052 signal pts/3    00:00:00 bai2.out
T   1000   2847   2846  0  80   0    80  1052 signal pts/3    00:00:00 bai2.out
R   1000   2849   2792  0  80   0  2176  3557 -      pts/3    00:00:00 ps
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ kill -9 2847
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ ps -l
F S   UID    PID   PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
0 S   1000   2792   2782  0  80   0 -  6721 wait   pts/3    00:00:00 bash
0 T   1000   2846   2792  0  80   0 -  1052 signal pts/3    00:00:00 bai2.out
1 Z   1000   2847   2846  0  80   0 -     0 exit   pts/3    00:00:00 bai2.out <defunct>
0 R   1000   2850   2792  0  80   0 -  3557 -      pts/3    00:00:00 ps
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ kill -9 2846
duong@ubuntu:~/Desktop/baitap/lab4/bai2$ ps -l
F S   UID    PID   PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
0 S   1000   2792   2782  0  80   0 -  6721 wait   pts/3    00:00:00 bash
0 R   1000   2851   2792  0  80   0 -  3557 -      pts/3    00:00:00 ps
[1]+  Killed                  ./bai2.out
duong@ubuntu:~/Desktop/baitap/lab4/bai2$
```

Bài 3/

```c
#include <stdio.h>
int main(int argc, char **argv) {
    int re;
    re = system("mkdir /home/duong/Desktop/BaiTap");
    if (re == 0)
        printf("done 1 !!!\n");
    else
        printf("error 1\n");

re = system("mkdir /home/duong/Desktop/BaiTap/LyThuyet");
    if (re == 0)
        printf("done 2 !!!\n");
    else
        printf("error 2\n");

re = system("mkdir /home/duong/Desktop/BaiTap/ThucHanh");
    if (re == 0)
        printf("done 3 !!!!\n");
    else
        printf("error 3\n");

re = system("touch /home/duong/Desktop/BaiTap/ThucHanh/test");
    if (re == 0)
        printf("done 4!!!\n");
    else
        printf("error 4\n");

    return 0;
}
```
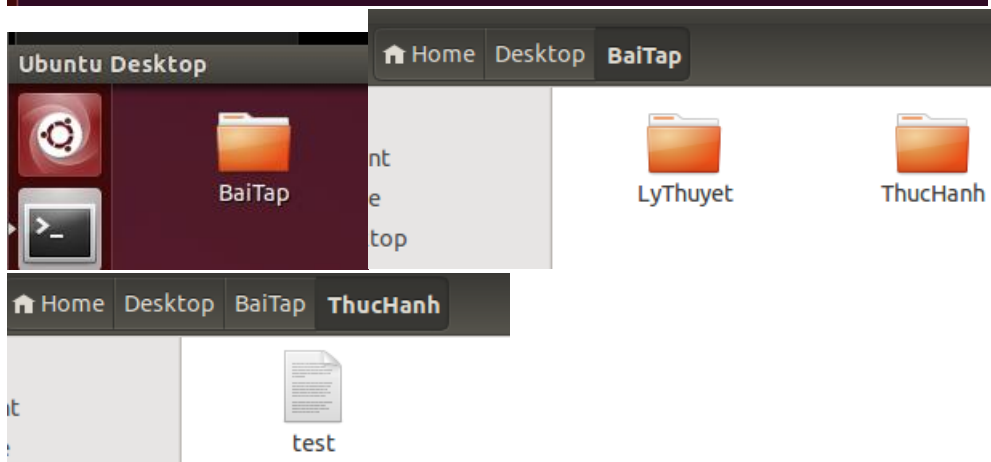
```
duong@ubuntu:~/Desktop/baitap/lab4/bai3$ gcc -c bai3.c
duong@ubuntu:~/Desktop/baitap/lab4/bai3$ gcc -o bai3.out bai3.o
duong@ubuntu:~/Desktop/baitap/lab4/bai3$ ./bai3.out
done 1 !!!
done 2 !!!
done 3 !!!!
done 4!!!
duong@ubuntu:~/Desktop/baitap/lab4/bai3$
```

Bài 4/

```c
#include<stdio.h>
#include<unistd.h>
#include<stdlib.h>
#include<time.h>
#include <ctype.h>
void producer(int a[10]){
                int i;
                srand(time(NULL));
                for(i=0;i<10;i++)
                        a[i]=rand()%100;
                FILE*f=fopen("temp.txt","wt");
                for(i=0;i<10;i++)
                        fprintf(f,"%d ",a[i]);
                fclose(f);
        }
void consumer(int a[10]){
                int i;int b[10];
                FILE*f=fopen("temp.txt","rt");
                for(i=0;i<10;i++){
                        fscanf(f,"%d",&a[i]);
                        b[i]=a[i];
                }
                        remove("temp.txt");//xoa file
                for(i=0;i<10;i++)
                        printf("%d ",b[i]);
                fclose(f);
                exit(0);//kthuc luon chu ko chose n thi se lap lai process con nhieu lan
        }
void main(){
void main(){
        int a[10];
        char chose='y';
        pid_t pid;
        do{
                        pid=fork();
                if(pid>0){
                        producer(a);
                        wait(NULL);
                }
                else if(pid==0){
                        sleep(10);
                        consumer(a);
                }
        printf("\nban co muon tiep tuc khong ? Y|N: ");
        scanf(" %c", &chose);   chose=tolower(chose);//chuyen hoa hay thuong deu ve het thuong de so sanh
        getchar();//xoa di nut enter,neu ko xoa se loi
        if(chose=='n')break;//dung chtrinh
        while(chose!='n' && chose!='y'){
                printf("nhap sai vui long nhap lai Y|N : ");
                scanf(" %c", &chose);   chose=tolower(chose);
                getchar();}
        }while(chose == 'y');
}
```

```
duong@ubuntu:~/Desktop/baitap/lab4/bai4$ gcc -c bai4.c
duong@ubuntu:~/Desktop/baitap/lab4/bai4$ gcc -o bai4.out bai4.o
duong@ubuntu:~/Desktop/baitap/lab4/bai4$ ./bai4.out
39 59 93 15 86 78 55 74 35 74
ban co muon tiep tuc khong ? Y|N: y
65 93 77 88 64 46 74 90 9 95
ban co muon tiep tuc khong ? Y|N: Y
77 21 48 5 81 66 30 34 47 98
ban co muon tiep tuc khong ? Y|N: k
nhap sai vui long nhap lai Y|N : u
nhap sai vui long nhap lai Y|N : K
nhap sai vui long nhap lai Y|N : n
duong@ubuntu:~/Desktop/baitap/lab4/bai4$
```