

OPERATING SYSTEMS LAB-4 WEEK-5

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1. TASK 1: TO SEE WHICH PROCESS IS RUNNING FIRST (PARENT OR CHILD)

--nano task1.c

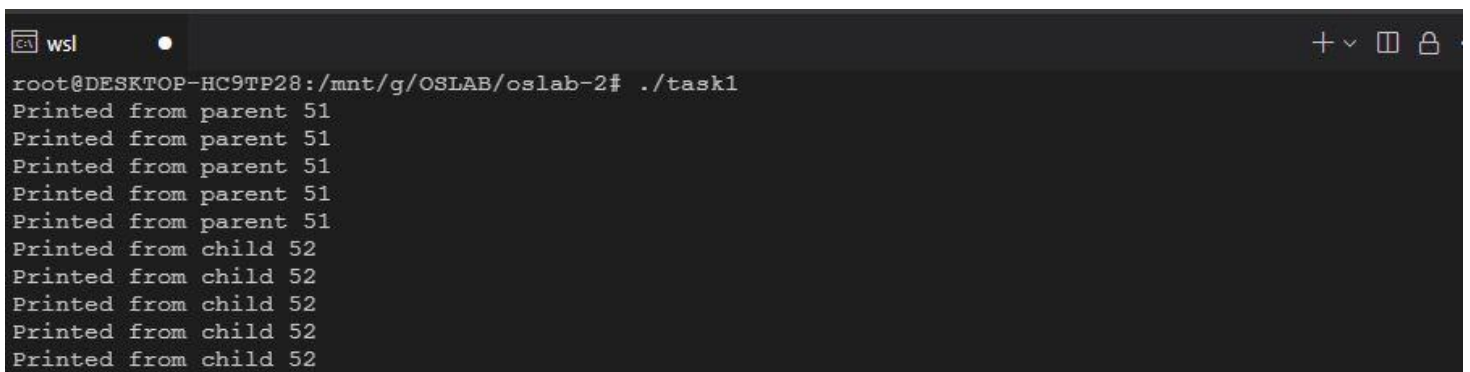
```
#include<stdio.h>
#include<unistd.h>

void main(){
int output=fork();
if(output==0){
for(int i=0;i<5;i++){
printf("\n Printed from child %d",getpid());
}
}
else{
for(int i=0;i<5;i++){
printf("\n Printed from parent %d",getpid());
}
}
}
```

-- CTRL+X [save quit to terminal and save file in nano]

-- gcc task1.c -o task1 [Compile C file with Output executable using this command]

-- ./task1 [Execute the file using this command]



```
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2# ./task1
Printed from parent 51
Printed from parent 51
Printed from parent 51
Printed from parent 51
Printed from parent 51
Printed from child 52
Printed from child 52
Printed from child 52
Printed from child 52
Printed from child 52
```

2. TASK 2: TO ADD AN INPUT STATEMENT IN THE PARENT PROCESS

-- nano task2.c

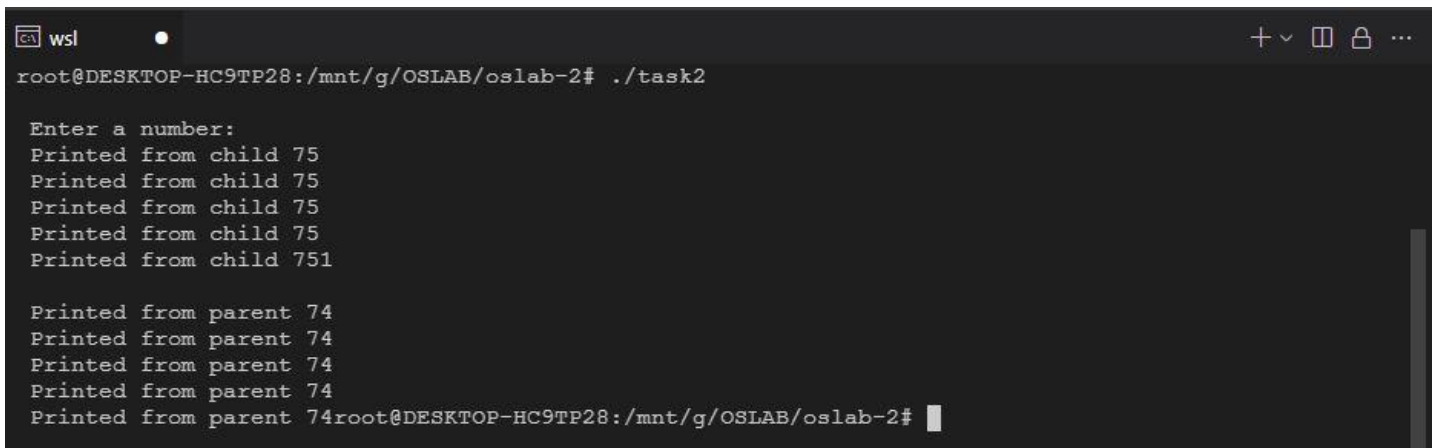
```
#include<stdio.h>
#include<unistd.h>

void main(){
    int outputTwo;
    int output=fork();
    if(output==0){
        for(int i=0;i<5;i++){
            printf("\n Printed from child %d",getpid());
        }
    }
    else{
        printf("Enter a number:");
        scanf("%d",&outputTwo);
        for(int i=0;i<5;i++){
            printf("\n Printed from parent %d",getpid());
        }
    }
}
```

-- CTRL+X [save quit to terminal and save file in nano]

-- gcc task2.c -o task2 [Compile C file with Output executable using this command]

-- ./task2 [Execute the file using this command]



```
wsl
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2# ./task2

Enter a number:
Printed from child 75
Printed from child 75
Printed from child 75
Printed from child 75
Printed from child 751

Printed from parent 74
Printed from parent 74
Printed from parent 74
Printed from parent 74
Printed from parent 74root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2#
```

3a. TASK 3A: PARENT PROCESS SHOULD PRINT NUMBERS FROM 6-10 WHILE CHILD SHOULD PRINT 1-5 NUMBERS

-- nano task3a.c


```
#include<stdio.h>
#include<unistd.h>

void main(){
    int output=fork();
    if(output==0){
        for(int i=1;i<=10;i++){
            printf("\n %d",i);
        }
    }
    else{
        wait();
        for(int i=6;i<=10;i++){
            printf("\n %d",i);
        }
    }
}
```

-- CTRL+X [save quit to terminal and save file in nano]

-- gcc task3a.c -o task3a [Compile C file with Output executable using this command]

-- ./task3a [Execute the file using this command]



```
wsl
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2# ./task3a
1
2
3
4
5
6
7
8
9
10
6
7
8
9
10root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2#
```

3b. TASK 3B: PARENT PROCESS SHOULD PRINT NUMBERS FROM 6-10 WHILE CHILD SHOULD PRINT 1-5 NUMBERS (Using Single loop)

-- nano task3b.c

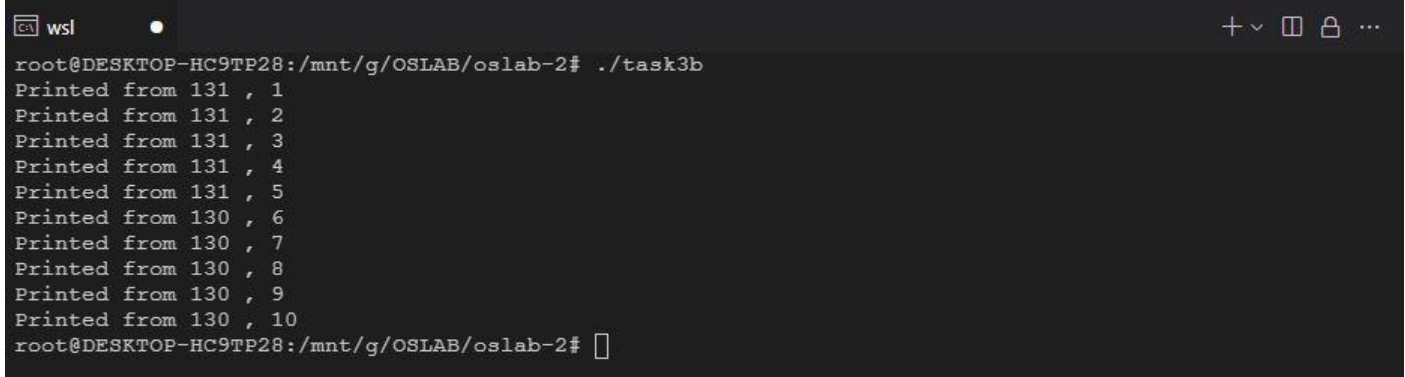
```
#include<stdio.h>
#include<unistd.h>

void main(){
int output=fork();
int j;
if(output==0){
j=1;
}
else{
wait();
j=6;
}
for(int i=j;i<5+j;i++){
printf("Printed from %d , %d \n",getpid(),i);
}
}
```

-- CTRL+X [save quit to terminal and save file in nano]

-- gcc task3b.c -o task3b [Compile C file with Output executable using this command]

-- ./task3b [Execute the file using this command]



```
ws1
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2# ./task3b
Printed from 131 , 1
Printed from 131 , 2
Printed from 131 , 3
Printed from 131 , 4
Printed from 131 , 5
Printed from 130 , 6
Printed from 130 , 7
Printed from 130 , 8
Printed from 130 , 9
Printed from 130 , 10
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2#
```

4. TASK 4: WRITE A PROGRAM WHICH TAKES AGE INPUT IN CHILD AND DETERMINES IF THE AGE IS ABOVE 18 OR NOT AND IN THE PARENT TAKE TWO NUMBERS AND CALCULATE THEIR SUM

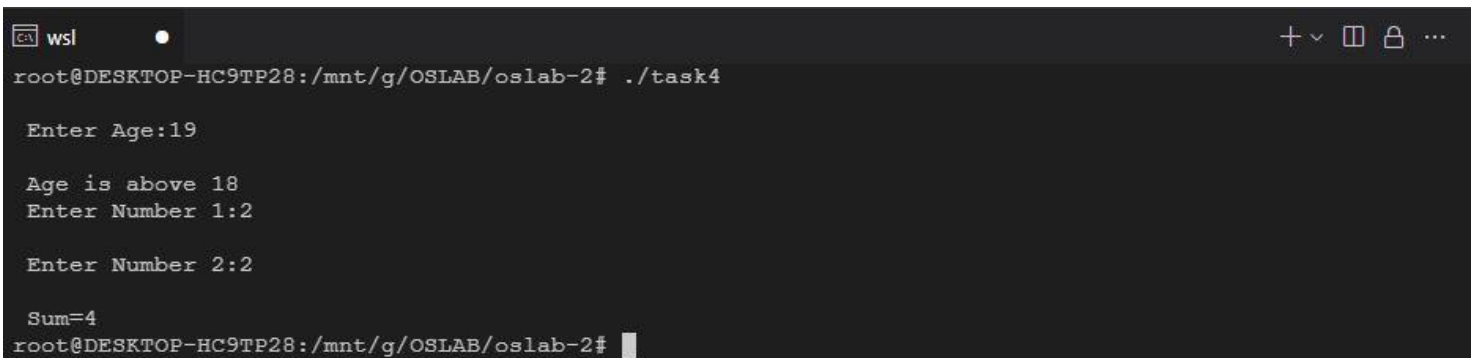
-- nano task4.c

```
#include<stdio.h>
#include<unistd.h>
void main(){
int output=fork();
int age;
int num1;
int num2;
if(output==0){
printf("\n Enter Age:");
scanf("%d",&age);
if(age>18){
printf("\n Age is above 18");
}
else{
printf("\n Age is below 18");
}
}
else{
wait();
printf("\n Enter Number 1:");
scanf("%d",&num1);
printf("\n Enter Number 2:");
scanf("%d",&num2);
printf("\n Sum=%d",num1+num2);
}
}
```

-- CTRL+X [save quit to terminal and save file in nano]

-- gcc task4.c -o task4 [Compile C file with Output executable using this command]

-- ./task4 [Execute the file using this command]



```
WSL
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2# ./task4

Enter Age:19

Age is above 18
Enter Number 1:2

Enter Number 2:2

Sum=4
root@DESKTOP-HC9TP28:/mnt/g/OSLAB/oslab-2#
```

