

FileEditSelectionViewGoRunTerminalHelp

Lab4

EXPLORERLAB4.vscode.randomrandom.cppExtension: C/C++ Extension Pack

random.cpp > main()

```
1  #include <stdio.h>
2  #include <unistd.h>
3  #include <sys/types.h>
4  #include <sys/wait.h>
5  #include <stdlib.h>
6
7  int main()
8  {
9      system("date");
10     pid_t pid = fork();
11
12     if(pid < 0)
13     {
14         printf("Fork failed\n");
15         return 1;
16     }
17     else if(pid == 0)
18     {
19         // Child Process
20         printf("Child Process\n");
21         printf("Child PID: %d\n", getpid());
22         printf("Child Parent PID: %d\n", getppid());
23         exit(0);
24     }
25     else
26     {
27         // Parent Process
28         wait(NULL); // wait for child
29
30         printf("\nParent Process\n");
31         printf("Parent PID: %d\n", getpid());
32         printf("Parent Parent PID: %d\n", getppid());
33     }
34
35     return 0;
```

PROBLEMSOUTPUTDEBUG CONSOLETERMINALPORTS

Thu Feb 5 15:07:17 IST 2026
Child Process
Child PID: 232713
Child Parent PID: 232702

Parent Process
Parent PID: 232702
Parent Parent PID: 232665
[1] + Done
4ITA2@debian:~/krtin_240911550/Lab4\$

"/usr/bin/gdb" --interpreter=mi --tty=\${DbgTerm} 0<" /tmp/Microsoft-MIEngine-In-yv4wltmw.4fj" 1>" /tmp/Microsoft-MIEngine-Out-re5gad5f.y3j"

C/C++: ...
cpgdbg: ra...

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Lab4

EXPLORERLAB4.vscodeq1q1.cq2q2.c

q2.c > main()
1 #include <stdio.h>
2 #include <unistd.h>
3 #include <sys/wait.h>
4 #include <stdlib.h>
5
6 int main()
7 {
8 system("date");
9 pid_t pid = fork();
10 if(pid == 0)
11 {
12 // child runs previous program
13 execl("./q1", "q1", NULL);
14
15 // runs only if exec fails
16 perror("Exec failed");
17 exit(1);
18 }
19 else
20 {
21 wait(NULL);
22 printf("Parent finished\n");
23 }
24
25 return 0;
26 }
27

PROBLEMSOUTPUTDEBUG CONSOLETERMINALPORTS

Thu Feb 5 15:22:26 IST 2026
Child Process
Child PID: 285482
Child Parent PID: 285479

Parent Process
Parent PID: 285479
Parent Parent PID: 285472
Parent finished
[1] + Done
"/usr/bin/gdb" --interpreter=mi --tty=\${DbgTerm} 0<" /tmp/Microsoft-MIEngine-In-c0agkrsq.0w0" 1>" /tmp/Microsoft-MIEngine-Out-m4xvrw2w.dfk"
4ITA2@debian:~/krtin_240911550/Lab4\$

C/C++: ...
cppdbg: ra...
cppdbg: q1
cppdbg: q2

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File

Edit

Selection

View

Go

Run

Terminal

Help

Lab4

EXPLORER

LAB4

.vscode

q1

q1.c

q2

q2.c

q3

q3.c

q3.c > ...

1

#include <stdio.h>

2

#include <unistd.h>

3

#include <stdlib.h>

4

#include <sys/wait.h>

5

6

int main()

7

{

8

system("date");

9

pid_t pid = fork();

10

11

if(pid == 0)

12

{

13

printf("Child exiting...\n");

14

exit(0);

15

}

16

else

17

{

18

printf("Parent sleeping...\n");

19

sleep(30); // gives time to check zombie

20

}

21

22

return 0;

23

}

24

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

Thu Feb 5 15:27:00 IST 2026

Parent sleeping...

Child exiting...

^C

4ITA2@debian:~/krtin_240911550/Lab4\$

OUTLINE

TIMELINE

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Spaces: 4

UTF-8

LF

{ } C

Linux

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EXPLORERLAB4> .vscode≡ a.out≡ q1C q1.c≡ q2C q2.c≡ q3C q3.c≡ q4C q4.c≡ q5C q5.c

C q5.c > main()1#include <stdio.h>2#include <pthread.h>3#include <stdlib.h>45int fib[100];6int n;78void* generate(void* arg)9{10fib[0]=0;11fib[1]=1;1213for(int i=2;i<n;i++)14fib[i]=fib[i-1]+fib[i-2];1516pthread_exit(NULL);17}1819int main()20{21pthread_t t;22system("date");23printf("Enter number of terms: ");24scanf("%d",&n);2526pthread_create(&t,NULL,generate,NULL);27pthread_join(t,NULL);2829printf("Fibonacci Series:\n");30for(int i=0;i<n;i++)31printf("%d ",fib[i]);3233return 0;34}35

PROBLEMSOUTPUTDEBUG CONSOLETERMINALPORTS

Thu Feb 5 15:54:26 IST 2026
Enter number of terms: 6
Fibonacci Series:
0 1 1 2 3 5 [1] + Done
.erf"
4ITA2@debian:~/krtin_240911550/Lab4\$

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