

# Operating Systems

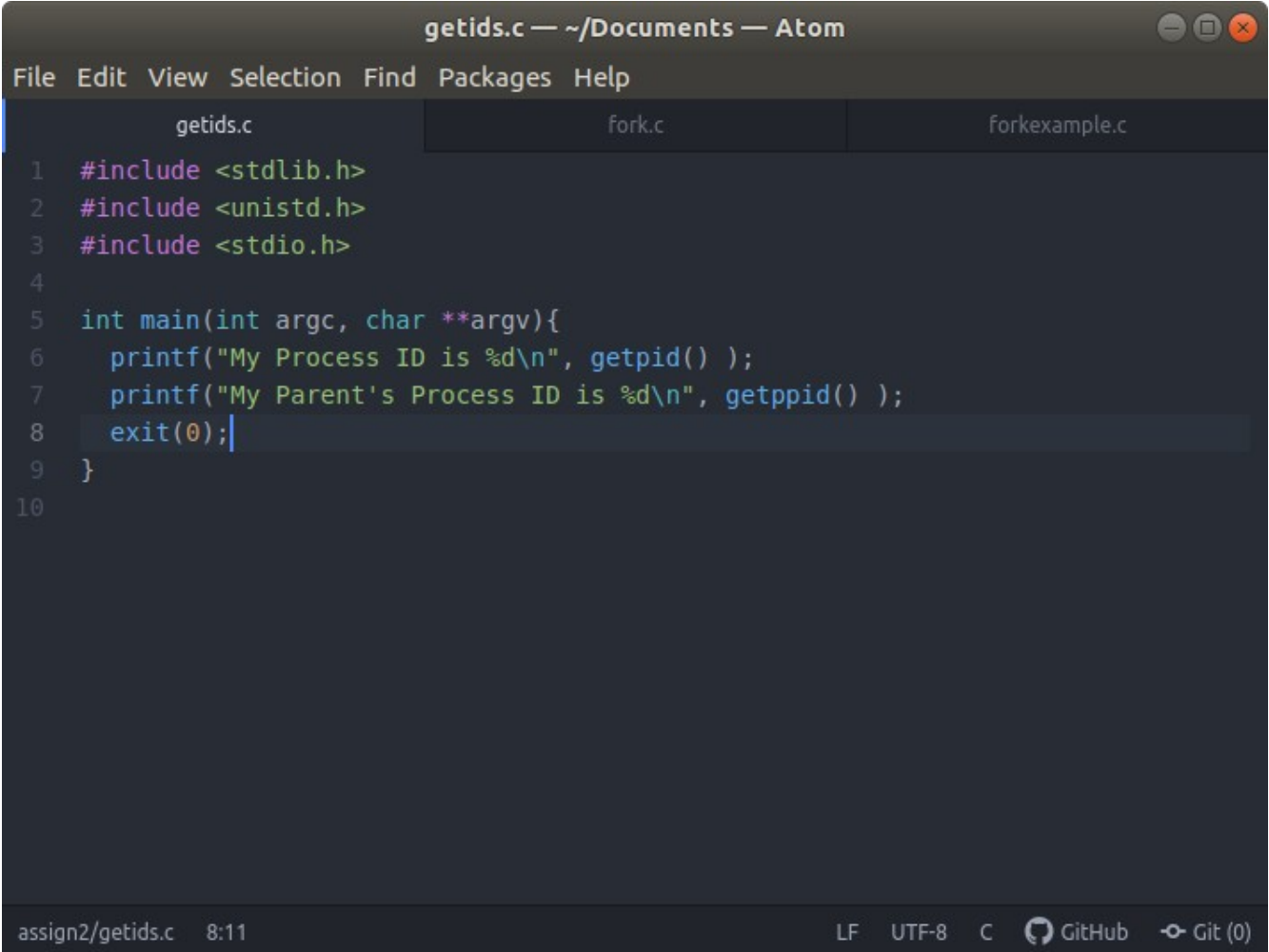
Momina Atif Dar

P18-0030

Section: B

## Assignment 02

1.



```
getids.c — ~/Documents — Atom
File Edit View Selection Find Packages Help

getids.c    fork.c    forkexample.c

1  #include <stdlib.h>
2  #include <unistd.h>
3  #include <stdio.h>
4
5  int main(int argc, char **argv){
6      printf("My Process ID is %d\n", getpid() );
7      printf("My Parent's Process ID is %d\n", getppid() );
8      exit(0);
9  }
10

assign2/getids.c 8:11  LF  UTF-8  C  GitHub  Git (0)
```

momina@death-eater: ~/Documents/assign2

File Edit View Search Terminal Help

```
momina@death-eater:~/Documents/assign2$ gcc -o getids getids.c
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3530
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3531
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3532
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3535
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3539
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3540
```

```
My Parent's Process ID is 2328
```

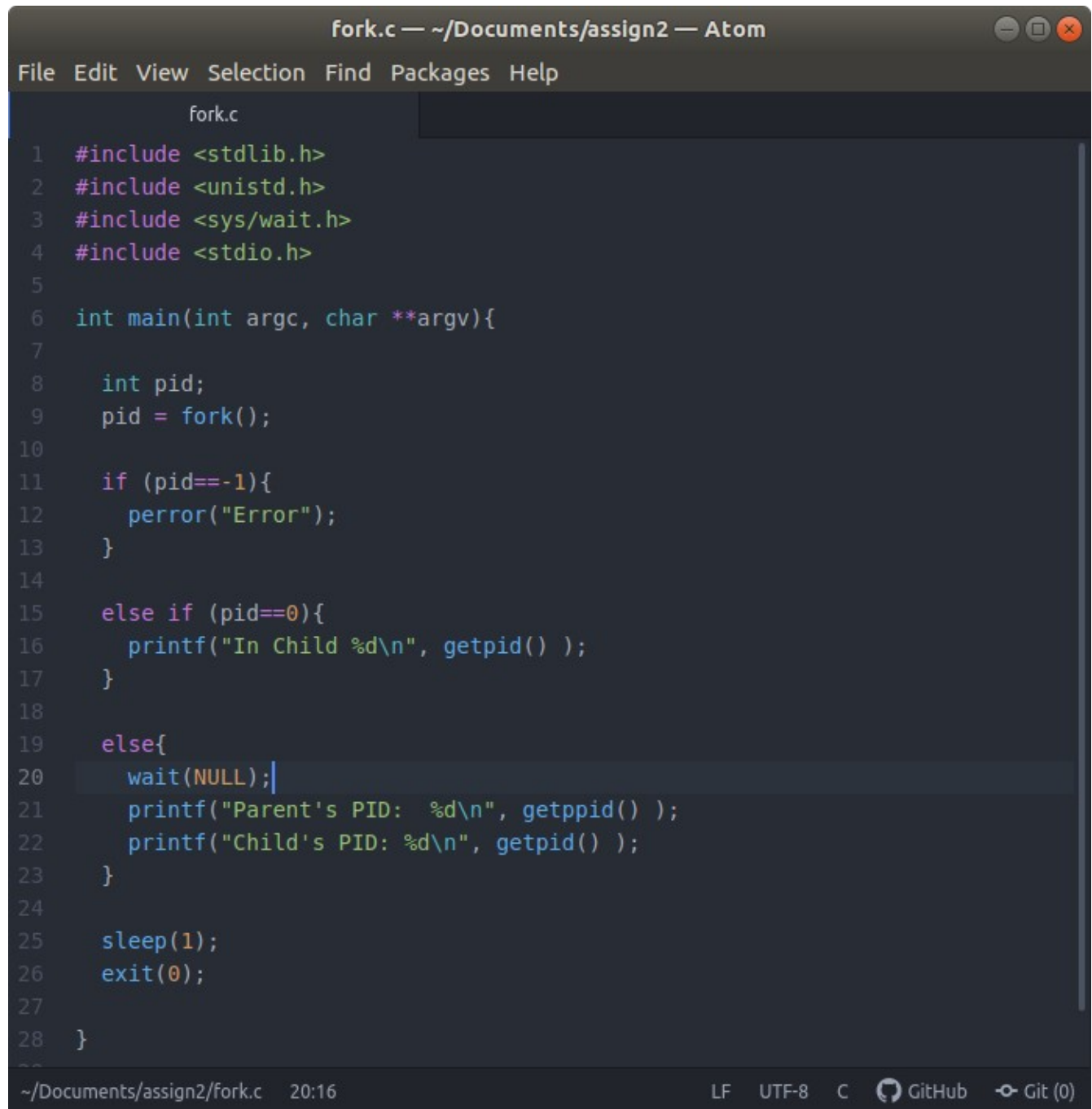
```
momina@death-eater:~/Documents/assign2$ ./getids
```

```
My Process ID is 3541
```

```
My Parent's Process ID is 2328
```

```
momina@death-eater:~/Documents/assign2$ _
```

2.



```
fork.c — ~/Documents/assign2 — Atom
File Edit View Selection Find Packages Help

fork.c
1  #include <stdlib.h>
2  #include <unistd.h>
3  #include <sys/wait.h>
4  #include <stdio.h>
5
6  int main(int argc, char **argv){
7
8      int pid;
9      pid = fork();
10
11     if (pid==-1){
12         perror("Error");
13     }
14
15     else if (pid==0){
16         printf("In Child %d\n", getpid() );
17     }
18
19     else{
20         wait(NULL);
21         printf("Parent's PID:  %d\n", getppid() );
22         printf("Child's PID: %d\n", getpid() );
23     }
24
25     sleep(1);
26     exit(0);
27
28 }
```

~/Documents/assign2/fork.c 20:16 LF UTF-8 C GitHub Git (0)

momina@death-eater: ~/Documents/assign2

File Edit View Search Terminal Help

```
momina@death-eater:~/Documents/assign2$ gcc -o fork fork.c
```

```
momina@death-eater:~/Documents/assign2$ ./fork
```

```
In Child 2748
```

```
Parent's PID: 2216
```

```
Child's PID: 2747
```

```
^[Amomina@death-eater:~/Documents/assign2$ ./fork
```

```
In Child 2750
```

```
Parent's PID: 2216
```

```
Child's PID: 2749
```

```
momina@death-eater:~/Documents/assign2$ ./fork
```

```
In Child 2752
```

```
Parent's PID: 2216
```

```
Child's PID: 2751
```

```
momina@death-eater:~/Documents/assign2$ ./fork
```

```
In Child 2758
```

```
Parent's PID: 2216
```

```
Child's PID: 2757
```

```
momina@death-eater:~/Documents/assign2$ ./fork
```

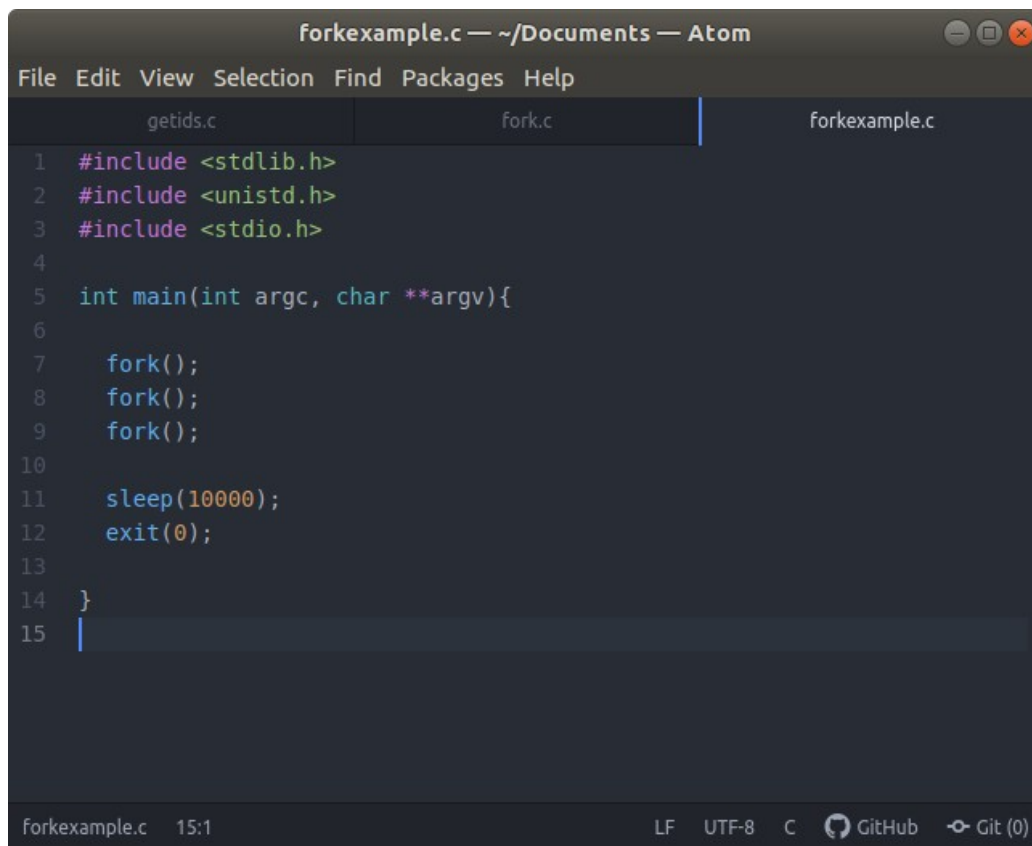
```
In Child 2760
```

```
Parent's PID: 2216
```

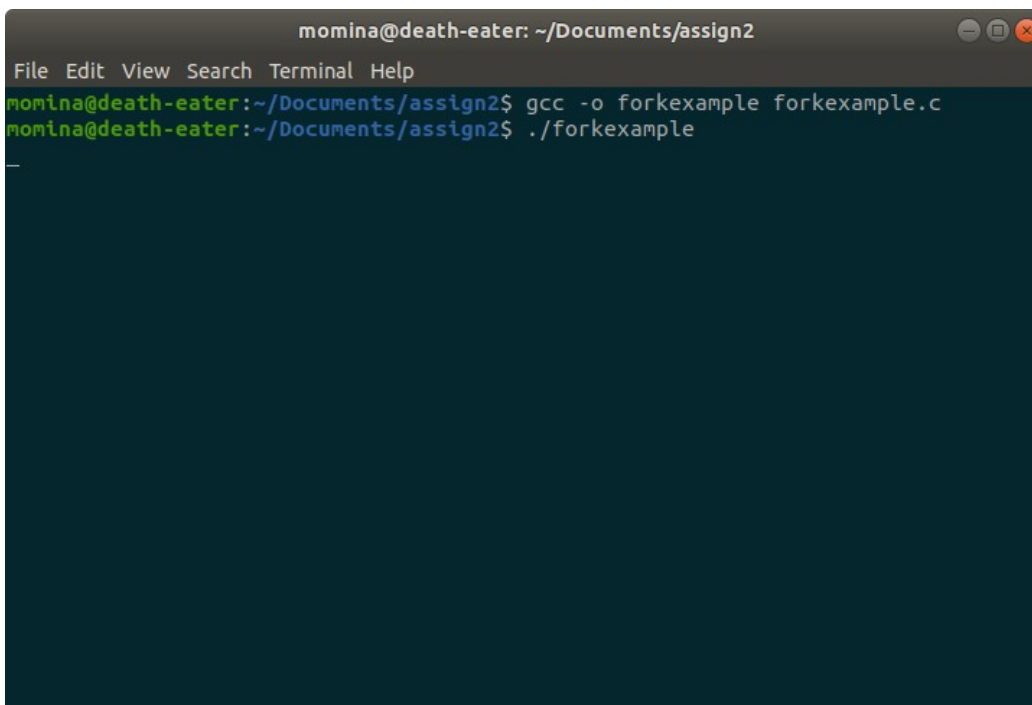
```
Child's PID: 2759
```

```
momina@death-eater:~/Documents/assign2$ _
```

3.



```
forkexample.c — ~/Documents — Atom
File Edit View Selection Find Packages Help
getids.c fork.c forkexample.c
1 #include <stdlib.h>
2 #include <unistd.h>
3 #include <stdio.h>
4
5 int main(int argc, char **argv){
6
7     fork();
8     fork();
9     fork();
10
11     sleep(10000);
12     exit(0);
13
14 }
15
forkexample.c 15:1 LF UTF-8 C GitHub Git (0)
```



```
momina@death-eater: ~/Documents/assign2
File Edit View Search Terminal Help
momina@death-eater:~/Documents/assign2$ gcc -o forkexample forkexample.c
momina@death-eater:~/Documents/assign2$ ./forkexample
```



```
momina@death-eater: ~  
File Edit View Search Terminal Help  
momina@death-eater:~$ ps aux | grep forkexample  
momina 3761 0.0 0.0 4372 716 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3762 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3763 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3764 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3765 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3766 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3767 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3768 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3813 0.0 0.0 21532 1148 pts/1 S+ 21:39 0:00 grep --color=au  
to forkexample  
momina@death-eater:~$ ps aux | grep forkexample  
momina 3761 0.0 0.0 4372 716 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3762 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3763 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3764 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3765 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3766 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3767 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3768 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3815 0.0 0.0 21532 1036 pts/1 S+ 21:39 0:00 grep --color=au  
to forkexample  
momina@death-eater:~$ _
```

```
momina@death-eater: ~  
File Edit View Search Terminal Help  
to forkexample  
momina@death-eater:~$ ps aux | grep forkexample  
momina 3761 0.0 0.0 4372 716 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3762 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3763 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3764 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3765 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3766 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3767 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3768 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3853 0.0 0.0 21532 1048 pts/1 S+ 21:40 0:00 grep --color=au  
to forkexample  
momina@death-eater:~$ ps aux | grep forkexample  
momina 3761 0.0 0.0 4372 716 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3762 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3763 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3764 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3765 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3766 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3767 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3768 0.0 0.0 4372 72 pts/0 S+ 21:39 0:00 ./forkexample  
momina 3855 0.0 0.0 21532 1060 pts/1 S+ 21:40 0:00 grep --color=au  
to forkexample  
momina@death-eater:~$ _
```