ASSIGNMENT # 3

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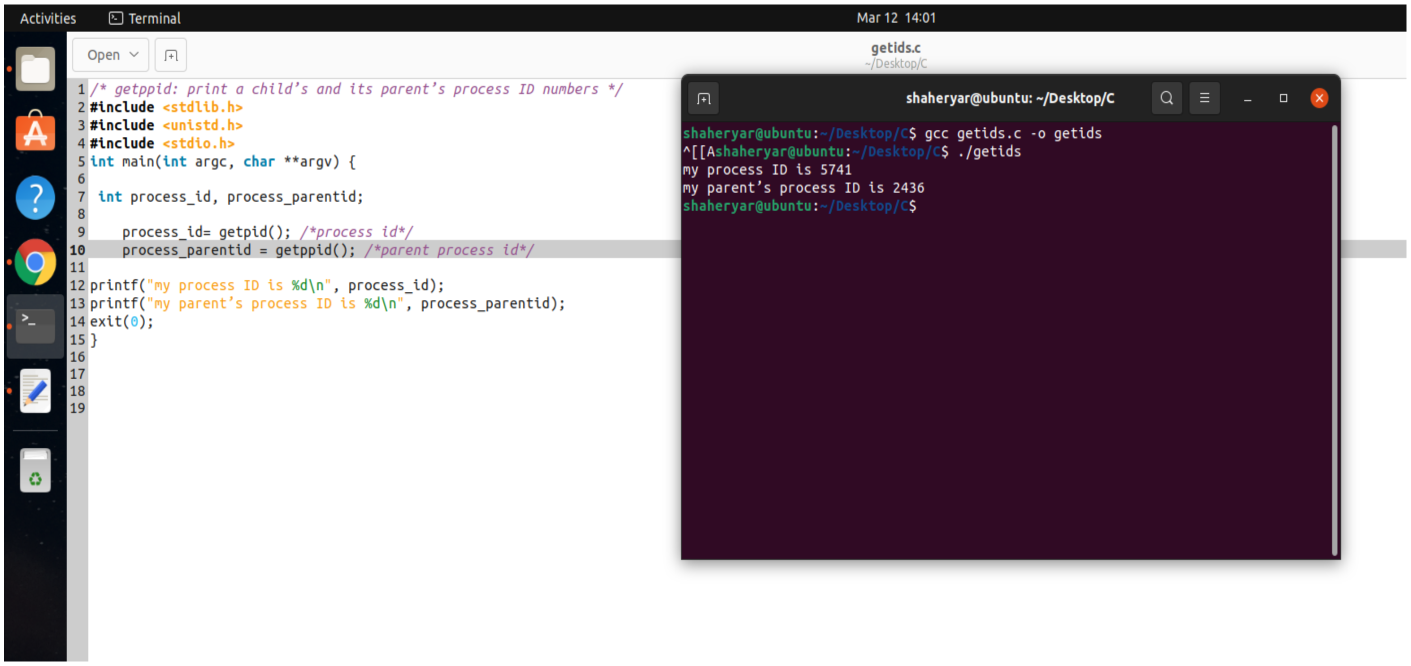
ROLL NO :	**20P-0128**
SECTION :	BS-CS **4-B**
SUBJECT :	OPERATING SYSTEM

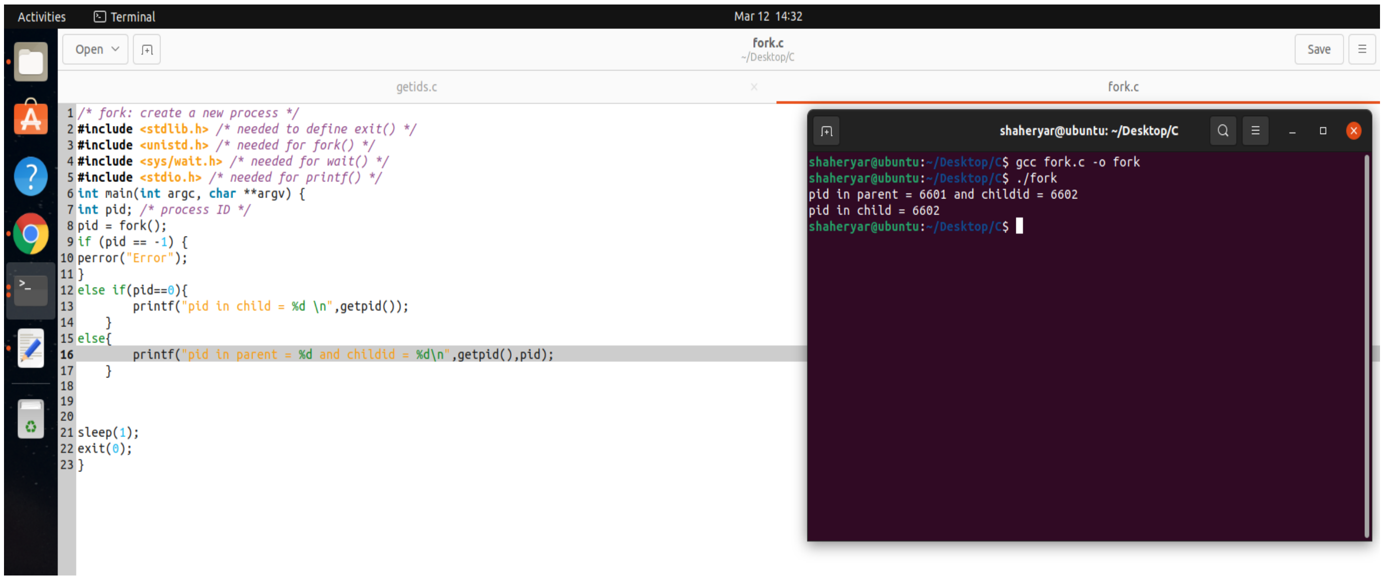
QUESTION -1



```c
/* getppid: print a child's and its parent's process ID numbers */
#include <stdlib.h>
#include <unistd.h>
#include <stdio.h>
int main(int argc, char **argv) {

 int process_id, process_parentid;

    process_id= getpid(); /*process id*/
    process_parentid = getppid(); /*parent process id*/

printf("my process ID is %d\n", process_id);
printf("my parent's process ID is %d\n", process_parentid);
exit(0);
}
```

```
shaheryar@ubuntu:~/Desktop/C$ gcc getids.c -o getids
^[[Ashaheryar@ubuntu:~/Desktop/C$ ./getids
my process ID is 5741
my parent's process ID is 2436
shaheryar@ubuntu:~/Desktop/C$
```

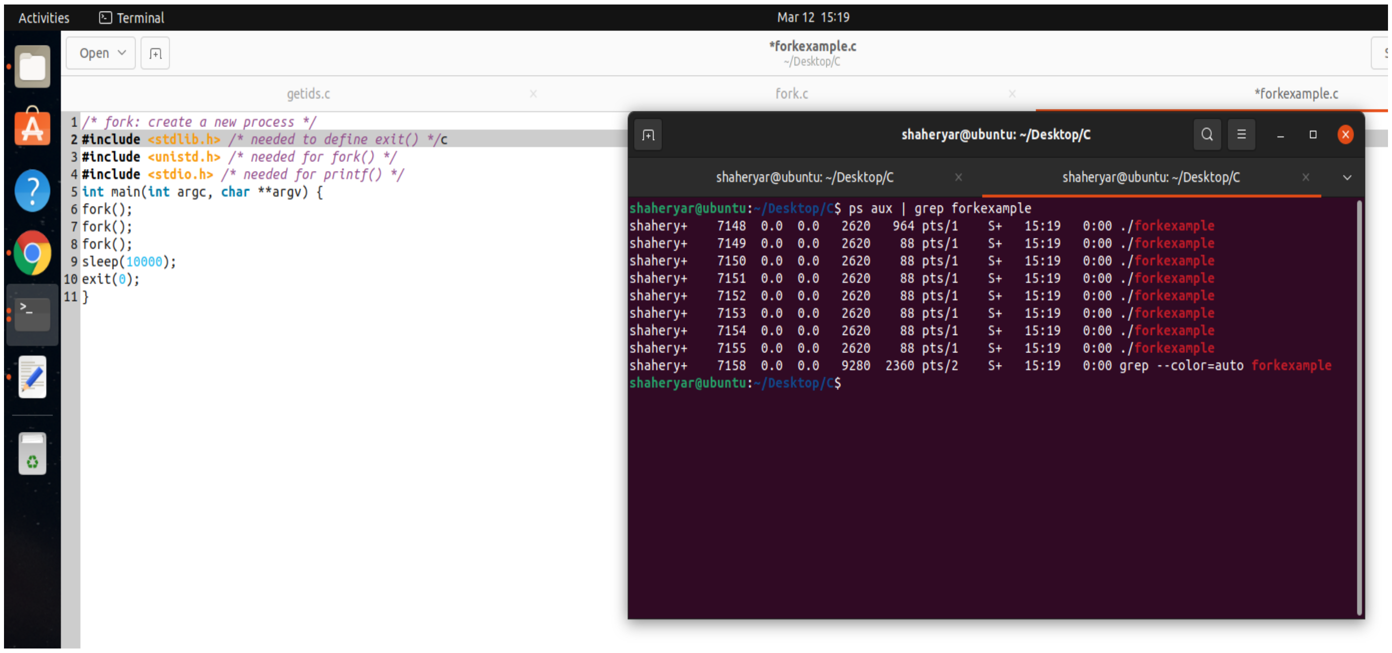
QUESTION -2



```c
/* fork: create a new process */
#include <stdlib.h> /* needed to define exit() */
#include <unistd.h> /* needed for fork() */
#include <sys/wait.h> /* needed for wait() */
#include <stdio.h> /* needed for printf() */
int main(int argc, char **argv) {
int pid; /* process ID */
pid = fork();
if (pid == -1) {
perror("Error");
}
else if(pid==0){
        printf("pid in child = %d \n",getpid());
    }
else{
        printf("pid in parent = %d and childid = %d\n",getpid(),pid);
    }



sleep(1);
exit(0);
}
```

```
shaheryar@ubuntu:~/Desktop/C$ gcc fork.c -o fork
shaheryar@ubuntu:~/Desktop/C$ ./fork
pid in parent = 6601 and childid = 6602
pid in child = 6602
shaheryar@ubuntu:~/Desktop/C$
```

QUESTION -3



Activities   Terminal   Mar 12 15:19

*forkexample.c
~/Desktop/C

getids.c   fork.c   *forkexample.c

```c
/* fork: create a new process */
#include <stdlib.h> /* needed to define exit() */c
#include <unistd.h> /* needed for fork() */
#include <stdio.h> /* needed for printf() */
int main(int argc, char **argv) {
fork();
fork();
fork();
sleep(10000);
exit(0);
}
```

shaheryar@ubuntu: ~/Desktop/C

```
shaheryar@ubuntu:~/Desktop/C$ ps aux | grep forkexample
shahery+   7148  0.0  0.0   2620   964 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7149  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7150  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7151  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7152  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7153  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7154  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7155  0.0  0.0   2620    88 pts/1    S+   15:19   0:00 ./forkexample
shahery+   7158  0.0  0.0   9280  2360 pts/2    S+   15:19   0:00 grep --color=auto forkexample
shaheryar@ubuntu:~/Desktop/C$
```