Operating Systems
Assignment # 03

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P20-0117

BSSE-4A

Task 01:

```c
#include <stdlib.h>
#include <unistd.h>
#include <stdio.h>
int main(int argc, char **argv) {
printf("my process ID is %d\n", getpid());
printf("my parent's process ID is %d\n", getppid());
exit(0);
}
```

```
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$
gcc getids.c -o getids
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$
./getids
my process ID is 12368
my parent's process ID is 10721
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$
```

Task 02:

```c
#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){
    // from child
    printf("In child \n child's process id is: %d\n",getpid());
}
else{
    // from parent
    pid_t cpid;
    cpid = wait(NULL);
    printf("In parent\n parent's process id is: %d and child's process id is:
%d\n", getpid(),cpid);
}
sleep(1);
exit(0);
}
```

```
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating
Systems/Assignments/3$ gcc Q2.c -o Q2
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating
Systems/Assignments/3$ ./Q2
In child
 child's process id is: 4186
In parent
 parent's process id is: 4185 and child's process id is: 4186
```

Task 03:

```
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$
gcc forkExample.c -o frokExample
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$
./forkExample
```

```
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$ ps aux | grep forkexample
hamza    12602  0.0  0.0  14436  1016 pts/1    S+   14:31   0:00 grep forkexample
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$ ps aux | grep forkexample
hamza    12604  0.0  0.0  14436  1016 pts/1    S+   14:31   0:00 grep forkexample
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$ ps aux | grep forkexample
hamza    12607  0.0  0.0  14440  1056 pts/1    S+   14:31   0:00 grep forkexample
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$ ps aux | grep forkexample
hamza    12615  0.0  0.0  14436  1012 pts/1    S+   14:31   0:00 grep forkexample
(base) hamza@hamza-Lenovo-ideapad-320-15ABR:~/Documents/Semester no.4/Operating Systems/Assignments/3$ 
```