



دانشکده مهندسی کامپیوتر

آزمایشگاه سیستم عامل

تمرین جلسه دهم

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پوریا رحیمی (۹۹۵۲۱۲۸۹)

Q1)

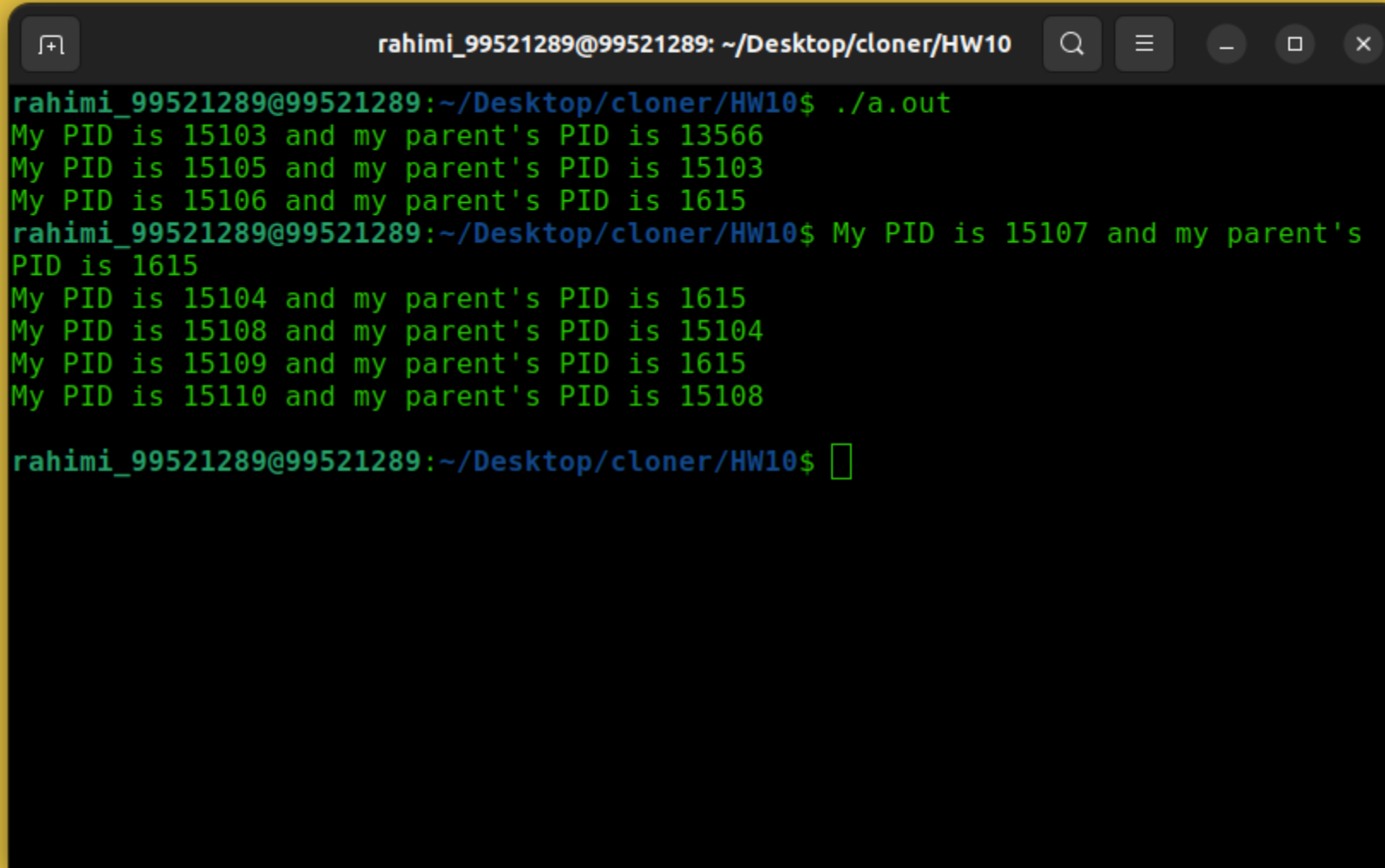
C Q1.c

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```
1  #include <stdio.h>
2  #include <unistd.h>
3  #include <sys/types.h>
4  #include <sys/wait.h>
5  #include <stdlib.h>
6
7
8
9  void main(){
10     printf("My PID is %d and my parent's PID is %d\n", getpid(), getppid());
11     int t=3;
12     while(t--){
13         pid_t id = fork();
14         id == 0 ? printf("My PID is %d and my parent's PID is %d\n", getpid(), getppid()) : 1;
15     }exit(0);
16 }
17
```

Q1)

A terminal window with a dark background and light green text. The window title is 'rahimi\_99521289@99521289: ~/Desktop/cloner/HW10'. The terminal shows the execution of a program './a.out' which prints several lines of text about process IDs (PIDs) and parent PIDs. The output is as follows:

```
rahimi_99521289@99521289:~/Desktop/cloner/HW10$ ./a.out
My PID is 15103 and my parent's PID is 13566
My PID is 15105 and my parent's PID is 15103
My PID is 15106 and my parent's PID is 1615
rahimi_99521289@99521289:~/Desktop/cloner/HW10$ My PID is 15107 and my parent's
PID is 1615
My PID is 15104 and my parent's PID is 1615
My PID is 15108 and my parent's PID is 15104
My PID is 15109 and my parent's PID is 1615
My PID is 15110 and my parent's PID is 15108

rahimi_99521289@99521289:~/Desktop/cloner/HW10$
```

Q2)

```
rahimi_99521289@99521289: ~  
rahimi_99521289@99521289:~$ top -n 1 | awk ' NR > 6 {print $2}' | head -n 4  
PID  
1967  
15911  
1  
rahimi_99521289@99521289:~$
```