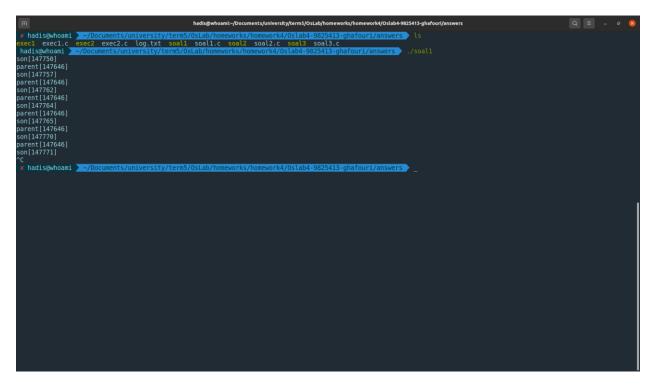
به نام خدا

حديث غفوري 9825413

سوال 1



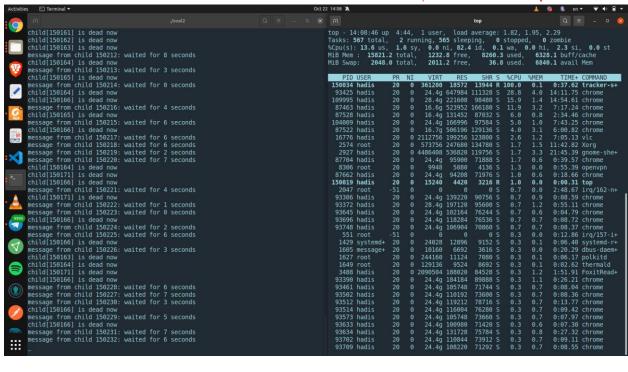
نتيجه:

Pidها به صورت متوالی ایجاد میشوند.

سوال 2

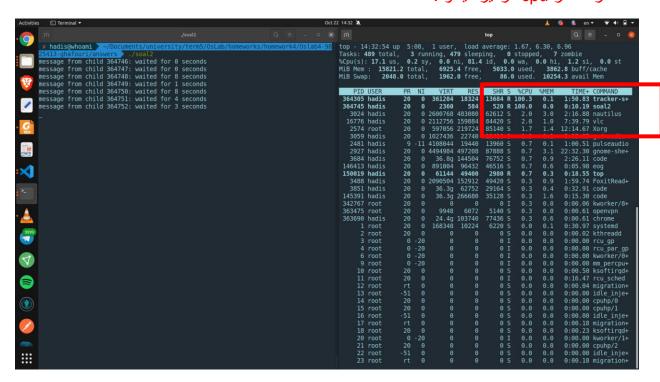
```
message from child 143870: waited for 3 seconds
message from child 143871: waited for 7 seconds
message from child 143872: waited for 9 seconds
message from child 143872: waited for 1 seconds
message from child 143873: waited for 1 seconds
message from child 143875: waited for 1 seconds
message from child 143876: waited for 7 seconds
message from child 143876: waited for 7 seconds
                                                                                                                                                                                                                                                                                                                                  hadis@whoaml:~/Documents/university/term5/OsLab/homeworks/homework4/answers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q = - 6 (
   child[143872] is active now child[143873] is dead now message from child 143892: waited for 0 seconds child[143874] is dead now child[143874] is dead now child[143875] is dead now message from child 143893: waited for 7 seconds message from child 143894: waited for 4 seconds child[143876] is dead now child[143876] is active now message from child 143895: waited for 3 seconds child[143876] is dead now message from child 143896: waited for 5 seconds child[143876] is dead now message from child 143897: waited for 5 seconds child[143876] is dead now message from child 143898: waited for 9 seconds child[143876] is dead now message from child 143898: waited for 9 seconds child[143876] is dead now message from child 143990: waited for 0 seconds child[143876] is dead now message from child 143900: waited for 0 seconds child[143876] is dead now child[143876] is dead now child[143876] is dead now message from child 143941: waited for 2 seconds message from child 143944: waited for 3 seconds message from child 143944: waited for 3 seconds
                k hadis@whoami 🔀
```

زمانی که از sleep استفاده میکنیم:



زمانی که از حلقه ی for به جای sleep استفاده میکنیم:

۰۰ در صد از cpu درگیر میشود.



سوال ٣

نتیجه هم در ترمینال چاپ میشود هم در فایل log.txt

```
hadis@whoami
                                                                                                                          gcc soal3.c -o soal3
soal3.c:56:16: warning: implicit declaration of function 'wait' [-Wimplicit-function-declaration]
56 | tpid = wait(&status);
 soal3.c:75:13: warning: null argument where non-null required (argument 2) [-Wmonnull]
75 | execup(address, NULL);
 hadis@whoami >-
/exec1
.n child
//exec2 13:42:5/ 3901 ./exec1
./exec2 exec2
exec2 2021-10-22 13:43:12 5001 ./exec2
./badis@whoami --/Occuments/university/term5/OStab/homeworks/homework4/answers ls
exec1 exec1.c exec2 exec2.c log.txt soal1 soal1.c soal2 soal2.c soal3 soal3.c
./occuments/university/term5/OStab/homeworks/homework4/answers ls
exec1 exec1.c exec2 exec2.c log.txt soal1 soal1.c soal2 soal2.c soal3 soal3.c
./occuments/university/term5/OStab/homeworks/homework4/answers
                                                                                                                     code <u>.</u>
gcc <u>soal3.c</u> -o <u>soal3</u>
soal3.c:56:16: warning: implicit declaration of function 'wait' [-Wimplicit-function-declaration]
56 | tpid = wait(&status);
soal3.c:75:13: warning: null argument where non-null required (argument 2) [-Wnonnull]

75 | execup(address, NULL);
hadis@whoami .../execl
in child
execl
2021-10-22
 exec2
021-10-22
hadis@whoami
                                                5001
                                                           ./exec2
```

