

Executable Commands

ls

```
>> ls
sleeping for 10
a.out          a.out.dSYM      as1p2_skeleton.c  assign1.c        input.txt
```

```
>> ls &
>> sleeping for 6
ls &
>> sleeping for 12
```

```
>> ls&
>> sleeping for 13
a.out          a.out.dSYM      as1p2_skeleton.c  assign1.c        input.txt
```

No Space also Valid (auto-handled by given function)

Other executable commands should output similarly

Built-in Commands

cd

```
>> cd
```

Change to home directory

```
>> cd folder
cd: folder: No such file or directory
```

Display proper error message

```
>> ls
sleeping for 7
AnacondaProjects  Google Drive  PycharmProjects  matlab_crash_dump.8536-1
Applications      Library      VirtualBox  VMs             nltk_data
Desktop           Movies      anaconda        octave
Documents         Music       git-completion.bash  project
Downloads         Pictures    git-prompt.sh
Dropbox           Public     graph.log
```

```
>> cd Desktop
>> 
```

Standard Behaviour

exit

```
>> exit
aakashnandi assign1 $ 
```

Standard Behaviour

jobs

```
>> jobs
ID      PID      Cmd      status  spawn-time
```

When no jobs are there

```
ID      PID      Cmd      status  spawn-time
2       32806    ls       RUNNING Wed Jan 31 21:59:02 2018
3       32807    ls       RUNNING Wed Jan 31 21:59:04 2018
```

Standard Behaviour

pwd

```
>> pwd
/Users/aakashnandi/Desktop
```

Standard Behaviour

wc

```
>> wc -l input.txt
3
>> wc -w input.txt
10
>> 
```

Standard Behaviour

```
>> wc -a input.txt
Unrecognized flag
0
>> wc w input.txt
Unrecognized flag
0
>> wc l input.txt
Unrecognized flag
0
```

Error Behaviour

```
>> wc -a input.txt
Unrecognized flag
0
>> wc -a in.txt
The file does not exist
Unrecognized flag
0
>> 
```

Error Behaviour

```
C assign1.c  input.txt x
1  hi there
2  i have 3
3  lines here
4  and 10 words.
```

Input.txt

Find input.txt in Content>Assignment Information section in MyCourses.

fg

```
ID      PID      Cmd      status  spawn-time
8       32920    ls       RUNNING Wed Jan 31 22:03:38 2018

>> fg 8
bringing jobno 8 and pid 32920 to foreground
$RECYCLE.BIN          cd          papers
Relative_radical      debug_info.txt  pwd
Win10_1709_English_x64.iso  jobs        ubuntu-16.04.3-desktop-amd64.iso
assign1               ls
>> 
```

Standard Behaviour

nice

1. First ls & executes in 2 seconds in background
2. While typing the second ls &, the first ls & prints the result as a result the input is distorted and shifted. This second ls & executes in 8 seconds
3. Third ls & executes in 7 seconds
4. "nice date" checks for linked list to be emptied (print statement in the given function). Once the second ls & and third ls & print the result date is executed in 11 seconds.

Note that the output of the second ls & and third & might be interleaved between "checking linked list" lines depending upon the wait time allocated to it.

```
aakashnandi assign1 $ ./a.out
>> ls &
>> sleeping for 2
ls a.out          a.out.dSYM          as1p2_skeleton.c    assign1.c          input.txt
&
>> sleeping for 8
ls &
>> sleeping for 7
nice date
checking linked list
checking linked list
checking linked list
checking linked list
a.out             a.out.dSYM          as1p2_skeleton.c    assign1.c          input.txt
checking linked list
a.out             a.out.dSYM          as1p2_skeleton.c    assign1.c          input.txt
sleeping for 11
Wed 31 Jan 2018 23:27:30 EST
>> █
```

Please note that any corner case not specified in this document will not be tested for.

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