

# Sample Outputs

## Part 1

```
osh>ps -al
F S  UID      PID      PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
4 S  1000      1725      1723  2  80   0  - 318502 ep_pol tty2        01:05:28 Xorg
0 S  1000      1746      1723  0  80   0  - 49230 poll_s tty2        00:00:00 gnome-sess
0 S  1000     72388     72375  0  80   0  -   625 do_wai pts/1        00:00:00 shell
4 R  1000     76588     72388  0  80   0  -   5013 -          pts/1        00:00:00 ps
osh>ls
random_txt  shell
osh>touch hello_world
osh>ls
hello_world random_txt  shell
osh>echo "how are you?"
"how are you?"
osh>rm hello_world
osh>ls
random_txt  shell
```

## Part 2

```
osh>!!
No commands in history
osh>ls
part1.png  random_txt  shell
osh>!!
ls
part1.png  random_txt  shell
osh>echo "hello world"
"hello world"
osh>!!
echo "hello world"
"hello world"
osh>
```

## Part 3

```
osh>touch myFile
osh>echo "hello world" > myFile
osh>cat myFile
"hello world"
osh>
```

## Part 4

```
osh>ABC=hello
osh>DEF=hello_world
osh>touch $ABC
osh>echo $DEF > hello
osh>cat $ABC
hello_world
osh>
```

## Part 5

```
osh>cat simple-shell.c | head -5
/**
 * Simple shell interface program.
 *
 * Operating System Concepts - Tenth Edition
 * Copyright John Wiley & Sons - 2018
osh>
```