

Ravindra Bisram, Danny Hong, Elias Rodriguez

```
ravin@DESKTOP-1H47C32 ~/OS/P3
$ ./rav
# Here I will test the pwd, cd, and exit functionalities
#
pwd
/home/ravin/OS/P3

cd testcd
pwd
/home/ravin/OS/P3/testcd

cd
pwd
/home/ravin

exit
```

Testing the required built in functions

```
ravin@DESKTOP-1H47C32 ~/OS/P3
$ ./rav
exit 50

ravin@DESKTOP-1H47C32 ~/OS/P3
$ echo $?
50
```

```

ravin@DESKTOP-1H47C32 ~/OS/P3
$ ./rav
cat output.txt

Child process 19896 exited normally.
Real: 0.031742s User: 0.015000s Sys: 0.000000s

ls -l >output.txt

Child process 21212 exited normally.
Real: 0.033192s User: 0.015000s Sys: 0.015000s

cat output.txt
total 708
-rwxr-xr-x 1 ravin ravin 167458 Oct 15 18:23 a.exe
-rwxr-xr-x 1 ravin ravin 7850 Oct 15 18:02 danny.c
-rwxr-xr-x 1 ravin ravin 167437 Oct 15 17:11 danny.exe
-rwxr-xr-x 1 ravin ravin 1174 Oct 15 17:11 danny.exe.stackdump
-rwxr-xr-x 1 ravin ravin 7864 Oct 15 22:44 dannyshell.c
-rw-r--r-- 1 ravin ravin 0 Oct 15 23:16 output.txt
-rw-r--r-- 1 ravin ravin 0 Oct 15 18:58 output1.txt
-rw-r--r-- 1 ravin ravin 6772 Oct 15 18:46 prob3.c
-rwxr-xr-x 1 ravin ravin 167236 Oct 15 15:16 prob3.exe
-rwxr-xr-x 1 ravin ravin 167268 Oct 15 23:00 rav.exe
-rw-r--r-- 1 ravin ravin 7339 Oct 15 23:08 ravshell.c
-rw-r--r-- 1 ravin ravin 12 Oct 15 15:16 sample1.txt
-rwxr-xr-x 1 ravin ravin 2026 Oct 13 18:43 shell.c
-rwxr-xr-x 1 ravin ravin 307 Oct 14 21:24 test1.sh
-rwxr-xr-x 1 ravin ravin 636 Oct 14 21:24 test2.sh
drwxr-xr-x+ 1 ravin ravin 0 Oct 15 18:46 testcd
-rw-r--r-- 1 ravin ravin 18 Oct 15 23:12 testfile.out
-rw-r--r-- 1 ravin ravin 18 Oct 15 23:12 testfile2.out

Child process 768 exited normally.
Real: 0.016754s User: 0.000000s Sys: 0.015000s

```

```

Child process 6620 exited normally.
Real: 0.027275s User: 0.000000s Sys: 0.000000s

cat output.txt
total 708
-rwxr-xr-x 1 ravin ravin 167458 Oct 15 18:23 a.exe
-rwxr-xr-x 1 ravin ravin 7850 Oct 15 18:02 danny.c
-rwxr-xr-x 1 ravin ravin 167437 Oct 15 17:11 danny.exe
-rwxr-xr-x 1 ravin ravin 1174 Oct 15 17:11 danny.exe.stackdump
-rwxr-xr-x 1 ravin ravin 7864 Oct 15 22:44 dannyshell.c
-rw-r--r-- 1 ravin ravin 0 Oct 15 23:16 output.txt
-rw-r--r-- 1 ravin ravin 0 Oct 15 18:58 output1.txt
-rw-r--r-- 1 ravin ravin 6772 Oct 15 18:46 prob3.c
-rwxr-xr-x 1 ravin ravin 167236 Oct 15 15:16 prob3.exe
-rwxr-xr-x 1 ravin ravin 167268 Oct 15 23:00 rav.exe
-rw-r--r-- 1 ravin ravin 7339 Oct 15 23:08 ravshell.c
-rw-r--r-- 1 ravin ravin 12 Oct 15 15:16 sample1.txt
-rwxr-xr-x 1 ravin ravin 2026 Oct 13 18:43 shell.c
-rwxr-xr-x 1 ravin ravin 307 Oct 14 21:24 test1.sh
-rwxr-xr-x 1 ravin ravin 636 Oct 14 21:24 test2.sh
drwxr-xr-x+ 1 ravin ravin 0 Oct 15 18:46 testcd
-rw-r--r-- 1 ravin ravin 18 Oct 15 23:12 testfile.out
-rw-r--r-- 1 ravin ravin 18 Oct 15 23:12 testfile2.out
"Hello World"

Child process 17480 exited normally.
Real: 0.028261s User: 0.000000s Sys: 0.015000s

```

I/O Redirection test

```

ravin@DESKTOP-1H47C32 ~/OS/P3
$ ./rav
./test2.sh
/tmp
/home/ravin
./test2.sh: line 11: testfile.out: Permission denied
./test2.sh: line 14: lsssssssss: command not found
./test2.sh: line 17: testfile.out: Permission denied

Child process 18060 exited with exit status 1.
Real: 0.095034s User: 0.000000s Sys: 0.015000s

```

Test2.sh

```

ravin@DESKTOP-1H47C32 ~/OS/P3
$ ./rav
./test1.sh
total 708
-rwxr-xr-x  1 ravin ravin 167458 Oct 15 18:23 a.exe
-rwxr-xr-x  1 ravin ravin   7850 Oct 15 18:02 danny.c
-rwxr-xr-x  1 ravin ravin 167437 Oct 15 17:11 danny.exe
-rwxr-xr-x  1 ravin ravin   1174 Oct 15 17:11 danny.exe.stackdump
-rwxr-xr-x  1 ravin ravin   7864 Oct 15 22:44 dannyshell.c
-rw-r--r--  1 ravin ravin   1041 Oct 15 23:18 output.txt
-rw-r--r--  1 ravin ravin     0 Oct 15 18:58 output1.txt
-rw-r--r--  1 ravin ravin   6772 Oct 15 18:46 prob3.c
-rwxr-xr-x  1 ravin ravin 167236 Oct 15 15:16 prob3.exe
-rwxr-xr-x  1 ravin ravin 167268 Oct 15 23:32 rav.exe
-rw-r--r--  1 ravin ravin   7347 Oct 15 23:31 ravshell.c
-rw-r--r--  1 ravin ravin    12 Oct 15 15:16 sample1.txt
-rwxr-xr-x  1 ravin ravin   2026 Oct 13 18:43 shell.c
-rwxr-xr-x  1 ravin ravin   307 Oct 14 21:24 test1.sh
-rwxr-xr-x  1 ravin ravin   636 Oct 14 21:24 test2.sh
drwxr-xr-x+ 1 ravin ravin     0 Oct 15 18:46 testcd
-rw-r--r--  1 ravin ravin    18 Oct 15 23:32 testfile.out
-rw-r--r--  1 ravin ravin    18 Oct 15 23:32 testfile2.out

Child process 25364 exited with exit status 17.
Real: 0.113756s User: 0.000000s Sys: 0.091000s

```

exit

```

ravin@DESKTOP-1H47C32 ~/OS/P3
$ echo $?
17

```

Test1.sh