



# Assignment Two

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## Overview

We have to make a shell with functions such as `pwd`, `cd`, `mkdir`, `rmdir`, `exit`, `>` to redirect output to file and `<` to take input to an executable from a file and at last using pipe to take output of one executable and redirect it as input to another executable.

## Goals

1. Make a secondary shell with some defined functionalities common to terminal
2. All the code for shell is in c and called using master c file as a child process.

## Specifications

I have created a master file in c named `master.c` which just call the main file `shell.c` as child process as written in the description and the shell prompts on the terminal. It contains a Makefile which contains the procedure of running the script.

## Commands for terminal to run file

### I. `make`

It makes all the files that is executive file, object files in the parent directory.

### II. `make run`

It makes the executive file of the shell class(if they are not already there as from make command) to run and produce output on the terminal.

### III. `make clean`

It clears all the `obj/*.o *.exe *.so *.o` to remove from the computer.

## Commands for my shell

### 1. pwd

It returns the current working directory

### 2. cd directory(returns direct is not there if directory doesn't exist)

It changes the current working directory to parent directory by the command (cd ..) or to one of its subdirectory.

### 3. mkdir directory(name of the directory which you want to make)

It makes a directory named directory(as declared above).

### 4. rmdir directory(name of the directory which you want to delete)

It deletes the named directory from the directory.

### 5. exit

Exits from the shell.

### 6. EXE file

It runs the exe file.

### 7. EXE File < input

It runs the exe file by taking input from the input file.

### 8. EXE File > output

It redirects the output of the executive file to the output file.

### 9. EXE File < input > output

It takes the input from the input file runs the executive and directs the output to the output.

## 10. EXE File | EXE File

It runs the first exe file, redirects the output of first EXE file to the input of second EXE file.

## 11. EXE File < input | EXE File

The first EXE file takes the input from the input file, redirects the output of the first EXE file to the input of the second EXE file and runs the second executive.

## 12. EXE File < input | EXE File> output

It takes the input from the input file runs the executive, directs the output to the first executive to the input of the second executive and finally redirects the output to the output.

## 13. EXE File | EXE File | EXE File | EXE File | EXE File | EXE File.... | EXE File

It runs the first executive redirects the output of the first executive to the second executive, does the same till it runs the last executive.

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## Important

1. The shell needs the readline to take input. IN my laptop it is located at `"/usr/local/lib -l/usr/local/include -lreadline"` have a look at it that it is installed on your laptop.
2. Please leave at least one spacing between the exe file and commands.

