

cse15l-lab-reports

Lab Report #1

Command: `cd`

This navigates to the user's home directory when no arguments are provided.

(Initial working dir: `/home/lecture1` , end working dir: `/home` , Error: no)

```
[user@sahara ~/lecture1]$ cd
[user@sahara ~]$
```

When provided with a directory as an argument, it will make that directory the working directory.

(Initial working dir: `/home` , end working dir: `/home/lecture1` , Error: no)

```
[user@sahara ~]$ cd lecture1/
[user@sahara ~/lecture1]$
```

When provided with a file, we see an error since `cd` requires a directory as its argument.

(Initial working dir: `/home/lecture1` , end working dir: `/home/lecture1` , Error: yes)

```
[user@sahara ~/lecture1]$ cd Hello.java
bash: cd: Hello.java: Not a directory
```

Command `ls`

When `ls` is used on its own, it prints out all files and directories in the working directory:

(Working dir: `/home` , Error: no)

```
[user@sahara ~]$ ls
lecture1
```

When `ls` is provided a real directory, it prints out the files and directories in the provided directory. However, it remains in the same directory, e.g. `/home` in this case:

(Working dir: `/home` , Error: only if the directory provided doesn't exist)

```
[user@sahara ~]$ ls lecture1/  
Hello.java  messages  README  
[user@sahara ~]$
```

When `ls` is provided with a file, it lists that file - but only if it exists.

(Working dir: `/home/lecture1` , Error: only if the file provided doesn't exist)

```
[user@sahara ~/lecture1]$ ls Hello.java  
Hello.java
```

Command `cat`

When `cat` is not provided any arguments, it waits for input, and outputs whatever the keyboard sends. It only seems to stop when provided with an EOF or a SIGINT from the user.

(Working dir: `/home` , Error: no)

```
[user@sahara ~]$ cat  
test <-- user input  
test <-- terminal output  
^C <-- ctrl+C (sig-int)  
[user@sahara ~]$
```

When `cat` is provided with a directory, it handles it gracefully. `cat` does not seem to work with directories:

(Working dir: `/home` , Error: yes)

```
[user@sahara ~]$ cat lecture1/  
cat: lecture1/: Is a directory
```

When `cat` is provided with a file, it outputs the contents of the file to the output stream (default to the terminal when called from the terminal).

(Working dir: /home/lecture1 , Error: no)

```
[user@sahara ~/lecture1]$ cat Hello.java
import java.io.IOException;
import java.nio.charset.StandardCharsets;
import java.nio.file.Files;
import java.nio.file.Path;

public class Hello {
    public static void main(String[] args) throws IOException {
        String content = Files.readString(Path.of(args[0]), StandardCharsets.UTF_8);
        System.out.println(content);
    }
}
```