

Lab Exercise

- **Make *mini shell* that supports I/O redirection & pipes**
 - Should be under an infinite loop with **conditional exit**
 - Should execute the entered command on the **child process**
 - Should make the parent process **wait** for all the child processes to finish before exiting
 - Should execute programs in **\$PATH**
 - Should handle **3 redirections(<, >, >>)** and **pipe(|)**
- **No restrictions on header files**

Lab Exercise

- There will be **only one IPC at one line**

- e.g. Commands like the example below will not be tested

- » That's for PA2

- » `cat < test.txt | grep test`

- **Skeleton code:**

- You can use your current shell for PA2 for this assignment
- Otherwise, you can use the skeleton code on iCampus

- **Example**

```
./w8
$ ls -a
. .. Makefile w8 w8.c
$ echo 1 + 1 | bc
2
$ date > time.txt
$ cat < time.txt
Tue Apr 23 11:14:06 AM KST 2024
$ rm time.txt w8
$ tar czf ../2024000000.tar.gz -C ../week8 .
$ ls ../2024000000.tar.gz
../2024000000.tar.gz
$ exit
```

Exercise submission

- **Submit your source code and Makefile**
 - via **iCampus**
 - Makefile should generate ./w8 executable
 - Bundle *source code* and *Makefile* with tar command
 - » *tar.gz* format
 - \$ **tar cvzf** [student_id].tar.gz week8
 - We'll grade your submission with **make**
 - » If compilation fails, your points for this exercise will be zero