

# Homework #03

## Shell Script

**Announce: 2008/10/21**

**Due: 2008/11/4 23:59:59**

# Problem 1-1

- ◎ Write a script that prints the required lines of the following commands' results. Only print the lines which contains "current user"
  - > a. `fstat`
  - > b. `sockstat`
  - > c. `last`
  - > d. `ps aux`
  - > e. `cat /etc/passwd`

# Problem 1-1

- ◎ Requirement

- > Complete all five commands in the script called "`hw3_1_1.sh`"

- ◎ Hint:

- > `grep $USER`

# Problem 1-2

- ◎ Print the sum of all files' size in the directory(not including subdirectories), find the largest and the smallest files, and print its filenames, filesize and owners
  - > Hint: awk, sed, xargs, echo

# Problem 1-2

## ◎ Requirement

- > All commands should be concatenated by "`|`" (pipe) in one line
- > Put the line in the file called "`hw3_1_2.sh`"
- > Any temporary file is not allowed to be created by your script
- > If the number of the largest or the smallest was more than one, choose the last one

# Problem 1-2

## ◎ About using “;”

### > Wrong

- `%echo “hello” ; echo “world”`

hello

world

### > Right

- `%cat /etc/passwd | grep USERNAME | awk '{print "hello" ; print "world"}'`

hello

world

# Problem 2

- ◉ Change all files' filename extension at a specific directory, **including subdirectories**
- ◉ Requirement
  - > All codes should be in the file called **"hw3\_2.sh"**
  - > Any temporary file is not allowed to be created by your script

# Problem 2

## > Input format

- **-d**: the target directory running your program
- **-f**: the filename extension that you want to be replaced by the string follow "**-t**"
- **-t**: the filename extension that you want to replace the original filename extension **-f** specified
- These doesn't have any differences.
  - `./hw3_2.sh -d /tmp -f test -t xxx`
  - `./hw3_2.sh -t xxx -d /tmp -f test`
  - `./hw3_2.sh -f test -t xxx -d /tmp`



# Problem 3

- ◎ Use the tool `dialog(1)` to create required graphical user interface (GUI)
- ◎ Hint:
  - > `/usr/share/examples/dialog`
  - > `fetch(1),www/w3m-m17n, ftp/wget, www/lynx,www/link`

# Problem 3

## ◎ Requirement

### > Center GUI:

- Control all GUIs. It has some options as following:
- Options list:
  - **Wikipedia**: If you choose this option, it will invoke the Wiki GUI
  - **Dictionary**: If you choose this option, it will invoke the Dict GUI
  - **Exit**: If you choose this option, it will shutdown this Center GUI

Control GUI

Hi, this is Control GUI. You choose some options.  
Try it now!

Choose the OS you like:

- Wiki You can find you word!
- Dict Dictionary
- Exit

[ OK ] Cancel

[ Press 1-9, Up/Down, first letter or Enter ]

# Problem 3

## > Wiki GUI:

- Read the input string
- Search the string from <http://wikipedia.org/>, show the result web pages
- When Wiki GUI shutdown, it will return to Center GUI
- hint:
  - just use "[w3m \(www/w3m-m17n\)](http://www.w3m-m17n)" or other text web browsers.
  - [www/w3m-m17n](http://www.w3m-m17n), [www/lynx](http://www/lynx), [www/link](http://www/link)

----- Wiki GUI -----

Hi, this is Wiki GUI. You can use  
this GUI to search the input string from Wikipedia!  
Try it!

Try inputing your keyword:

+-----+  
| █ |

[ OK ]

Cancel

# Problem 3

## > Dict GUI:

- Read the input string
- Connect to google dictionary, look up the string, and finally show the data on **Date GUI**
- Link:
  - <http://www.google.com.tw/dictionary?hl=en>
- Hint:
  - `fetch(1)` , `ftp/wget`

```
+----- Dict GUI -----+
| Hi, this is Dict GUI. You can use |
| this GUI to look up the input string! |
| Try it! |
| |
| Try inputing your keyword: |
| +-----+ |
| |█ |
| +-----+ |
| +-----+ |
| [ OK ] Cancel |
| +-----+ |
```

# Problem 3

## > Data GUI:

- Show the data coming from the google dictionary.
- Just show the first definition or the shortest definition.
- When Data GUI shutdown, it will return to Center GUI.



Data GUI

airplane:\_an\_aircraft\_that\_has\_a\_fixed\_wing\_and\_is\_powered\_by\_propellers\_

(100%)

[ OK ]

# Problem 3

## ◎ Bonus:

- > Add new options in **Center GUI** with other services.
- > Merge the **Dict GUI** and the **Data GUI** into one called **Merged GUI**. The **Merged GUI** must have a option to go back to the **Center GUI**.
- > Hint:
  - Use `yesno`

----- Control GUI -----

Hi, this is Control GUI. You choose some options.  
Try it now!

Choose the OS you like:

-----  
| **Wiki** You can find you word!  
| **Dict** Dictionary  
**Exit**

[ **OK** ]

Cancel

----- [ Press 1-9, Up/Down, first letter or Enter ] -----

Wiki GUI

Hi, this is Wiki GUI. You can use  
this GUI to search the input string from Wikipedia!  
Try it!

Try inputing your keyword:

|plain

[ OK ]

Cancel

## Plain

From Wikipedia, the free encyclopedia

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[\[250px-Cryon\\_5\]](#)

#

A small mirage on the road, Western plains, [New South Wales, Australia](#)

In [geography](#), a plain is an area of [land](#) with relatively low relief. There are many types of plains, and the [archetype](#) for a plain is often thought of as a [grassland](#) that can be covered in [shrublands](#), [woodland](#) and [forest](#), or vegetation may be absent in [deserts](#). Types of [flatlands](#) for which the term is not generally used include [salt flats](#), [marshes](#), [playas](#), or [ice sheets](#).

Plains occur as [lowlands](#) and at the bottoms of [valleys](#) but also on [plateau](#) formed from flowing [lava](#), deposited by water, ice or wind, or formed by [erosion](#) by [water](#).

Plains in many areas are important for [agriculture](#), because where the soil is [fertile](#), and the flatness facilitates mechanization of crop production; or grazing for [livestock](#).

### Contents

- \* [1 Types of terrestrial plains](#)
- \* [2 Other types of plain](#)
- \* [3 Notes and references](#)
- \* [4 See also](#)

----- Control GUI -----

Hi, this is Control GUI. You choose some options.  
Try it now!

Choose the OS you like:

-----  
| **Wiki** You can find you word!  
| **Dict** Dictionary  
**Exit**

-----  
**[ OK ]** Cancel

----- [ Press 1-9, Up/Down, first letter or Enter ] -----

```
+----- Control GUI -----+
| Hi, this is Control GUI. You choose some options. |
| Try it now! |
|
|          Choose the OS you like:
|
| +-----+
| |      Wiki  You can find you word! |
| |      Dict  Dictionary              |
| |      Exit                                     |
| +-----+
|
|          [ OK ]          Cancel
+--- [ Press 1-9, Up/Down, first letter or Enter ] ---+
```

Dict GUI

Hi, this is Wiki GUI. You can use  
this GUI to search the input string from Wikipedia!  
Try it!

Try inputing your keyword:

|airplane█

[ OK ]

Cancel



Data GUI

airplane: \_an aircraft that has a fixed wing and is powered by propellers\_

(100%)

[ OK ]

Control GUI

Hi, this is Control GUI. You choose some options.  
Try it now!

Choose the OS you like:

Wiki	You can find you word!
Dict	Dictionary
Exit	

[ OK ]

Cancel

[ Press 1-9, Up/Down, first letter or Enter ]

# Problem 3

- > All codes should be in the file called "hw3\_3.sh".

# Due Day

- ◉ Due: 2008/11/4 23:59:59
- ◉ Put all your homework in `ID_version.tar`
  - > Ex: 9700001\_01.tar
- ◉ Upload to `sahw3.yzlin.org`
  - > anonymous
  - > Make directory called `student_ID`
  - > Put your homework on above directory
    - Ex: /9700001/9700001\_01.tar

# Demo time

- ◎ 2008/11/05 15:30 ~ 21:00
- ◎ At EC324