

Create a shell script on **cyberserver.uml.edu**, *fs\_usage\_warning* that sends email to users when a file system is above certain disk usage percentage. *You would check against the Use% of the df command.*

`fs_usage_warning [-c capacity-percentage] email-address [email-address] ...`

- You can specify more than one email address separate by spaces
  - the email address can just be an account name (e.g. mrichard) or a complete email address ([mrichard@cyberserver.uml.edu](mailto:mrichard@cyberserver.uml.edu) or [michael\\_richards@uml.edu](mailto:michael_richards@uml.edu))
- If no email addresses are specified, the programs should exit with an error.
- If the -c capacity-percentage is not specified, it should default to 60%.
  - You do not specify the % on the capacity-percentage
- If the file system is less than the specified amount, no mail message is sent. If the file system is greater than or equal to the specified amount and less than 90%, the mail message should have the following subject:  
    **“Warning: the file system <put in the file system directory> is above <capacity> % used”**  
The message body should have complete disk usage line from the df command for that file system along with the header. No other file systems should be in the mail message.
- If the file system is greater than or equal to 90%, the mail message should have the following subject:  
    **“Critical Warning: the file system <put in the file system directory> is greater than or equal to 90% capacity”**
- The message body should have complete disk usage line from the df command for that file system along with the header. No other file systems should be in that mail message.

You are required to use the mailx command and in-line redirection (here-document) to send the email.

Temporary files are not allowed. Use of a temporary file results in the loss of 15 points from the grade and not using in-line redirection will also result the loss of 15 points. You can lose a total of 30 points is you use a temporary file and don't use in-line redirection.

A separate email message should be sent for each file system that meets the warning capacity requirements.

**This program is to be written, executed and tested on cyberserver.uml.edu. The student should use the df command and process the output of the df command and only process these file system types, nfs, ext4 and ext2.**

```
df -k -t nfs -t ext4 -t ext2
Filesystem                1K-blocks      Used Available Use% Mounted on
/dev/mapper/cyberserver-root 141786532  5874056 128816568   5% /
/dev/sda1                  233191      49878   170872   23% /boot
ce-srv-02:/export/space/    38113280  4802560   33310720  13% /space
ce-srv-02:/export/home/     35976192  2665472   33310720   8% /users
```

The student should upload the completed shell script to Blackboard Learn. Do not submit a word document or pdf file. Name the file `fs_usage_warning-<lastname>` where `<lastname>` is your last name. The file should be in Unix/Linux format.