Personal FAQ

1.How to write a for loop in BSD bash?
The way to write a for loop in BSD bash is different from that in GNU bash. Normally, in GNU bash, we can write a for loop with the first command like this: for i in {0..100..10}. However, this way is not supported in BSD bash, we need to write for i in (seq 0 10 100) instead.

2.What is the difference between GNU grep and BSD grep?
GNU grep support the regular expression of Perl while BSD grep does not.

3.What is the difference between GNU sed and BSD sed?
GNU sed allows the use of \l in regular expression, for example\(abc\ldef\). However, BSD sed does not allow this.

4.How to use git clone?
git clone [url]

Git

5.How to fork repository from others' account?
press the fork button on the page of others' repository which is on the right side of the page.

6.How to clone my own repository into my computer?
copy the clone URL and then type git clone [url] in the desired directory using terminal.

7. How to commit changes locally?
after git add XXX(directory containing files just added or changed), type git commit and use VI to commit what have changed.

8. How to push changes on my repository?
put files into the repository locally then type the following in terminal: git status -s (getting the latest status of file newly added or changed), then type git add XXX(directory containing files that you have just added or changed), then type git commit and type what is committed using VI and then type git push.

9. How to send pull request to the repository I forked from?
press the create pull request button on the page of forked repository inside my own repository and the send the request.

10. Meaning of
git status - display status of working directory and staging area(view the status of files which are newly added or changed in the repository)
git log - display committed files and list the project history
git clone - copy the repository from github.com to own computer
git add - add changes in working directory to staging area, tell git to include update to a file in the next commit
git rm - remove files in the repository locally

git commit - commit staged snapshot(changes made to the repository) to the project history

git pull - update the repository cloned in the local computer by downloading updates from the repository online

git push - upload the newly added or changed fies in local repository to the repository online

Public Key

<u>11. How to create public key?</u>
cd ~/.ssh
ssh-keygen
cat ~/.ssh/id_rsa.pub
paste the content from local ~/.ssh/id_rsa.pub file to ~/.ssh/authorized_keys on remote host

IaaS/ Paas/ Saas and Openshift
<u>12. What is</u>
IaaS - Infrastructure as a Service(also known as HaaS(Hardware as a Service)), service provider outsources equipments like storage, hardware, server for client to rent.
PaaS - Platform as a Service, a way to rent hardware, os, storage and network capacity on the Internet. Clients can rent virtualised servers and use them to run applications.
SaaS - Software as a Service, applications hosted on network(Internet) by service provider for clients.

<u>13. How to connect to openshift account using ssh?</u>
install openshift client tool
rhc setup
log in to applications remotely
generate public key
upload public key to openshift

<u>14. How to clone repository on open shift?</u>
git clone

<u>15. How to push changes to open shift?</u>
git add
git commit
git push

Linux LFS

<u>16. What is</u>
/home - home directories of common users
/usr/bin - contains programs that can be used by user
/usr/local/bin - contains programs that are installed by user
/var - stores variable and temporary files created by users
/var/log - contains log files of the system(eg. login)

/etc - contains important configuration files
/dev - contains references to all hardware used by CPU
/tmp - temporary space used by system, cleaned after reboot

Command Line Tools

Misc

<u>17. What is</u>
Terminal - device that allows the communication between users and computers
shell - interface for accessing system service
Bash - shell in UNIX
environment variable - dynamic object that stores directory path to certain files

<u>18. How to set environmental variable for a session?</u>
use export command
export [name of environmental variable]=XXXXXX

<u>19. How to set environmental variable for all sessions?</u>
change the setting of environment variable in~/.bash_profile file as this file is
executed when login

<u>20. What is</u>
%temp% - contains directory path to where temporary files are stored
%programfiles% - contains directory path to where programs are stored
%appdata% - contains directory path to where application data file for user profile

<u>21. What is</u>
Bash alias - user designed command for replacing complicated commands

<u>22. How to write if in bash?</u>
if [condition]
then
        commands
else
        commands
fi   #end of if statement

<u>23. How to write while loop in bash?</u>
while [condition]
do
        commands
done

<u>24. How to write for loop in bash?</u>
GNU for
for variable in {0..100..10}
do
        commands
done

BSD for
for variable in (seq 0 10 100)
do
        commands
done

Specific command line tools

<u>25. What is</u>
cd - change directory
pwd - show the path of current directory
rm - remove file
rmdir - remove directory
mkdir - create a new directory
ls - list the files in current directory
ln - make link between files
find - find [directory path] -option(e.g. -name) '[match group]*'
grep - grep '[match group]' -A 2 (find the match group and display it and the 2 lines after it)
sed - sed -e 's/[match group(item wanted)]/[replace group]/g', sed -e '/[match group(item wanted)]/p', sed -e'/[match group(item wanted)]/d', d= delete
curl - curl "[url]" (add > [file_name] to save in specific file)

Emails

<u>26. What is</u>
MUA - Mail User Agent, program used to access and manage user's email
MTA - Mail Transfer Agent, software that transfers mail from computer
MDA - Mail Deliver Agent, software that delivers mail to local mail box

Regular Expressions

<u>27. What is</u>
^ - beginning of line
$ - end of line
* - repeat previous expression 0 to n times
\+ - repeat previous expression 1 to n times
\{1,3\} - repeat previous expression 1 to 3 times