VE482 Lab 3

Liu Yihao 515370910207

1 Simple git

- Search what is `git`

  Git is a fast, scalable, distributed revision control system with an unusually rich command set that provides both high-level operations and full access to internals.

- Install a git client.

  ```
  1  apt-get install git
  ```

- Search the use of the following git commands:

  - help Display help information about Git.
  - init Create an empty Git repository or reinitialize an existing one.
  - checkout Switch branches or restore working tree files.
  - branch List, create, or delete branches.
  - push Update remote refs along with associated objects.
  - pull Fetch from and integrate with another repository or a local branch.
  - merge Join two or more development histories together.
  - add Add file contents to the index.
  - diff Show changes between commits, commit and working tree, etc.
  - tag Create, list, delete or verify a tag object signed with GPG.
  - log Show commit logs.
  - fetch Download objects and refs from another repository.
  - commit Record changes to the repository.
  - clone Clone a repository into a new directory.
  - reset Reset current HEAD to the specified state.

- Setup your git repository on the VE482 server.

  ```
  1  git remote add ve482 git@ve482:515370910207/p1
  2  git push ve482
  ```

2 Git game

3 Working with source code

3.1 The `rsync` command

- In Minix 3 install the `rsync` software

  ```
  1  pkgin install rsync
  ```

- Install `rsync` on you Linux system

  ```
  1  apt-get install rsync
  ```

- Read `rsync` manpage

  ```
  1  man rsync
  ```

- Create an exact copy of the directory **/usr/src** into the directory **/usr/src_orig**

  ```
  1  cp -r /usr/src /usr/src_orig
  ```

- If you have altered Minix 3 source code during homework 2 remove your changes from **/usr/src_orig**

- Create an exact copy of the Minix 3 directory **/usr/src_orig** into your Linux system, using `rsync` and `ssh` (note that the ssh server must be activated under Linux)

  ```
  1  rsync -avz minix:/usr/src_orig/ ~/minix
  ```

3.2 The `diff` and `patch` commands

- Read the manpages of `diff` and `patch`

  ```
  1  man diff
  2  man patch
  ```

- Using the `diff` command, create a patch corresponding to your changes in homework 2