

# VE482 Lab Report

## Lab 3 - Fall 2020

**Name:** Shengyuan Xu

**ID:** 518370910200

**Email:** xushengyuan@sjtu.edu.cn

## Table of Contents

- Be ready to use git in the course
- Work with source code
- Prepare for project 1
- Regular expressions

1 Project 1: presentations

2 Working with source code

2.1 The `rsync` command

2.2 The `diff` and `patch` commands

2.3 Remarks

2.4 Basic git usage

3 Scripting and regular expressions

3.1 Shanghai air quality

3.2 IP address

## 1 Project 1: presentations

## 2 Working with source code

### 2.1 The `rsync` command

```
# In Minix 3 install the rsync software
pkgin install rsync
```

```
# Install rsync on you Linux system
apt-get install rsync
```

```
# Read `rsync` manpage
man rsync
```

```
# Create an exact copy of the directory /usr/src into the directory /usr/src_orig
rsync -av /usr/src /usr/src_orig
```

```
# If you have already altered Minix3 source code for homework2 undo your changes from
/usr/src_orig
rsync -av /usr/src_orig /usr/src
```

```
# Create an exact copy of the Minix 3 directory /usr/src into your Linux system, using  
rsync and ssh (note that the ssh server must be activated under Linux)  
rsync -av -e 'ssh -p 2222' root@192.168.164.128:/usr/src ~/
```

## 2.2 The `diff` and `patch` commands

```
# Read the manpages of diff and patch  
man diff  
man patch  
  
# Edit a file of your choice in /usr/src  
# Using the diff command, create a patch corresponding to the above changes  
echo "111" >> src/test  
diff -u src_orig/test src/test > patch  
  
# Retrieve your patch on your Linux system  
rsync -av -e 'ssh -p 2222' root@192.168.164.128:/root/patch /usr  
  
# Apply your patch to the copy of /usr/src_orig on your Linux system  
cd /usr  
patch -p2 < patch  
  
# Revert the patch  
patch -p2 -R < patch
```

## 2.3 Remarks

## 2.4 Basic git usage

选择一关

主要

远程

基础篇

循序渐进地介绍 Git 主要命令

1: Git Commit

高级篇

要开始介绍 Git 的超棒特性了，快来吧！

1: 分离 HEAD

移动提交记录

自由修改提交树

1: Git Cherry-pick

杂项

Git 技术、技巧与贴士大集合

1: 只取一个提交记录

高级话题

只为真正的勇士！

1: 多次 Rebase

2

3



## 3 Scripting and regular expressions

### 3.1 Shanghai air quality

```
curl -s 'http://aqicn.org/?city=Shanghai&widgetscript&size=large&id=52b39d71decf07.20261781' | sed -rn 's/.*hdrpm25[^>]*>([0-9]+).*hdrt[^>]*>([0-9]+).*/AQ: \1 Temp: \2 °C/p'
```

```
(base) ~ % curl -s 'http://aqicn.org/?city=Shanghai&widgetscript&size=large&id=52b39d71decf07.20261781' | sed -rn 's/.*hdrpm25[^>]*>([0-9]+).*hdrt[^>]*>([0-9]+).*/AQ: \1 Temp: \2 °C/p'
AQ: 70 Temp: 30 °C
```

### 3.2 IP address

```
ifconfig eth0 | awk -e '{for(j=1;j<=NF;j++){if($j=="inet"){print $(j+1)}}}'
```

```
169.254.255.129
```