

CSCI 2132

Software Development

Lab 2:

Unix Utilities; Emacs

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Lab Overview

- Review of login and basic SVN
- Autocompletion in shell
- Emacs: some operations
- Some Unix utilities
 - uniq, sort, cut
- A pipe

Important Note

Important Note: You should use the detailed notes to complete the lab, not the slides. The slides are meant to be used only by the TA to show on the screen while guiding you through the lab.

(You are looking at the slides here, so you should not use this document!)

Step 1: Logging in

1-a) Login

1-b) Change directory

Step 2: Check lab1 directory

2-a) SVN Update

2-b) Check the `lab1` directory

Step 3: Prepare lab2 directory

3-a) Go to the main SVN directory

3-b) Create directory `lab2`

3-c) Add `lab2` to SVN and submit it

3-d) Change current directory to `lab2`

Step 4: Autocompletion

- Submit `HelloWorld.java` to SVN

Step 5: Emacs: Beginning and end of a line

- C-a, C-e

Step 6: Emacs: Cut and paste

- C-k C-y to cut and paste lines
- C-@ (set mark), C-w (cut)

Step 7: Emacs: Copy and paste

- M-w (copy)

Step 8: Emacs: Undo changes

- C-x u (undo)
- Submit `names` to SVN

Step 9: Filters: `uniq`

– we will use the file `names`

```
uniq names
```

```
uniq -c names
```

```
uniq -f 1 names
```

– **save outputs to** `step9a.out`, `step9b.out`,
and `step9c.out`

– **Submit these three files to SVN**

Step 10: Filters: sort

10-a) `sort names`

10-b) `sort -k 1 names`

10-c) `sort -k 2 names`

10-d) `sort -k 2 -k 1 names`

10-e) `sort -k 1,2 names`

10-f) `sort -k 2,2 -k 1,1 names`

10-g) `sort -r -k 2 names`

Save the outputs of the above commands to the files:

`step10a.out` `step10b.out` `step10c.out`

`step10d.out` `step10e.out` `step10f.out`

`step10g.out`

– Submit these files to SVN

Step 11: Sort with CSV

— use emacs to create `names.csv`

```
sort -t, -k 2 -k 1 names.csv
```

— save the output in `step11.out`, and add a note using Emacs

– Submit `step11.out`, to SVN

Step 12: More about sort

– use emacs to create file `holidays`

```
sort -k 1M -k 2n holidays
```

— save the output in `step12.out`

– Submit `step12.out` to SVN

Step 13: The command `cut`

`cut -d " " -f 2,4 holidays`

— save the output in the file `step13.out`

– Submit `step13.out` to SVN

Step 14: A pipe for practice

– save the command-line in the file `cmd14`

– Submit `cmd14` to SVN

Step 15: The lab ends

– submit your work to the SVN repository