

CSCI 2132

Software Development

Lab 7:

Practicum 2 and Simple Makefile

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Lab Overview

- You can start working on problems for Practicum 2, and finish the rest of the lab after, or
- You can first work on the lab and later submit problems to the Practicum
- If you want a good time on the practicum questions, then it may be a good idea to do practicum questions first

Step 1: Login and Practicum 2

- If you want, you can first work on Practicum:
- go to directory: `~/csci2132/svn/CSID/`
- After finishing problem A.c or B.c copy them to local machine and submit them to the Practicum 1 web site

```
svn mkdir a4
```

- work in a4 on C.c and D.c
- submit them on the practicum web site:

```
https://web.cs.dal.ca/~dpc/csci2132-p2
```

- or directly from bluenose using one of the commands:

```
~/dpc/public/dpc-submit csci2132-p2 C.c
```

```
~/dpc/public/dpc-submit csci2132-p2 D.c
```

Step 2: Lab Directory Setup

- If you are done with the practicum, or want to continue with the rest of the lab

```
cd ~/csci2132/svn/CSID
svn update
svn mkdir lab7
cd lab7
```

Step 3: Getting program and test files

- Copy your `A.c` file or copy the sample file using:

```
cp ~/prof2132/public/practicums/A.c .
```
- Copy test files using:

```
cp ~/prof2132/public/practicums/A*.in .
cp ~/prof2132/public/practicums/A*.out .
```

Step 4: Simple Makefile

- command

```
ls
```

- should produce `A.c`, `A.in`, `A.out`, `A-2.in`, and `A-2.out`.
- Add these files to SVN (you can commit later)
- Create Makefile with the following content (the second line must start with Tab character):

```
A.exe: A.c
    gcc -o A.exe A.c
```

- Run command 'make' two times

Step 5: Testing with Makefile

- Add to Makefile

```
test-A: A.exe
    ./A.exe < A.in > A.new
    diff A.out A.new
    ./A.exe < A-2.in > A-2.new
    diff A-2.out A-2.new
```

- Save and run command: `make test-A`

Step 6: Target 'help' in Makefile

- Add the following at the **beginning** of the Makefile

help:

```
@echo make A.exe - to make executable  
@echo make test-A - to test program
```

- Try command: make
- Try command: make help
- Try command: make A.exe
- Try command: make test-A

Step 7: Recipes for programs C and D

- Add similar recipes for C and D, and for testing them
- You can find download some test files from the practicum web site or copy them from
`'~prof2132/public/practicums'` on bluenose

Step 8: SVN Submission

- Submit files to SVN
- The following files, and **only** these files should be submitted to SVN: `A.c`, `A.in`, `A.out`, `A-2.in`, `A-2.out`, `Makefile`, `C.c`, `C.in`, `C.out`, `C-2.in`, `C-2.out`, `D.c`, `D.in`, `D.out`, `D-2.in`, `D-2.out`.

Step 9: Creation of GitLab account

- Go to: `https://git.cs.dal.ca/`
- Use your CSID and password to Sign In
- Click 'New Project'
- Under Project Name, enter: `csci2132`
- You can enter a project description
- **Keep** visibility "Private"
- Choose to initialize repository with a README
- and click "Create project" and you will be on the new project page
- Choose 'Settings → Members' and add 'Vlado Keselj (@vlado)'
- 'Choose role permission': Developer
- You can Sign Out

Step 10: End of Lab

- The work on this lab is finished.
- You can continue working on the practicum and the rest of the assignment.
- Do not forget to commit all required files to SVN.