

Lab/Project Submission Instructions (this does NOT apply to Homework unless otherwise directed)

1. If the Lab/Project has you answer any questions, create a text file named **ans.txt** (note that the filename is lowercase!). It should be an ASCII text file like Notepad or xemacs creates ... not a WORD .doc document, not an Adobe .pdf file, etc. The first line of the file should be the filename. The next line should be your **LastName** and **mAlpha**. Put ALL question answers in the one file **ans.txt**, indicating what part of the lab the question came from. For the rest of these instructions we'll assume you're submitting Lab 12:

```
ans.txt
Gish m111234
Part 3: (your answer here)
Part 5: (your answer here)
```

Name of file.
Your **LastName** and **mAlpha**.
All of your answers.

This file will be submitted along with your other files.

2. All submissions of code that is to be compiled MUST have a makefile named **Makefile** (not makefile: note the uppercase!):

```
# lab12
# Gish m111234

TARGETS = foo bar foobar
all: $(TARGETS)

clean:
    rm -f *.o *~ $(TARGETS)

foo: foo.h foo.c someobj.o
    gcc -g -o foo foo.c someobj.o

bar: bar.h bar.c
    gcc -g -o bar bar.c

foobar: foobar.h foobar.c
    gcc -g -o foobar foobar.c
```

The first two lines of **Makefile** must be comments: **# lab12** and **# LastName mAlpha**.

The next line must be a *macro* named **TARGETS** (all uppercase) that lists the names all of the executable files (programs) to be built.

The next line must be a *target* named **all** (all lowercase). It builds all of the executables.

The next line must be a *target* named **clean** (all lowercase) with the rule as shown.

The next lines should be all of the

```
target: dependencies
      rules
```

needed to build the executable files.

3. The tar file that is created when you use **submit** should have as its contents **ONLY** your answers file (**ans.txt**), your **Makefile**, and the files listed as dependencies in your **Makefile** . This will usually only be source code files (.c) and header files (.h), with the rare case where your project also depends on object code (.o) we have given you. In the latter case you should also submit the .o file(s) since it's needed by **make**.

DO NOT submit any data files unless we explicitly ask you to!

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4. Create a directory named `lab12`. The name should be all lowercase, and the lab number should have no leading zeros (i.e., `lab3` would be correct but `lab03` would be wrong). Copy or move all of the files described in (3) above into this directory. Change directory to `../lab12`, i.e., to the directory one level *higher* than `lab12`. Execute this command:

```
$ /courses/stahl/etc/ic221/submit lab12
                                ↑ this is a space
```

Note that `lab12` is just the name of the directory to be submitted - NOT an absolute pathname. For example, this would be **WRONG**:

```
$ /courses/stahl/etc/ic221/submit /home/m111234/IC221/labs/lab12
-----
Don't use the absolute path name!
```

... and this would also be **WRONG**, because the trailing slash / shouldn't be there:

```
$ /courses/stahl/etc/ic221/submit lab12/
                                ↑
                                no trailing slash!
```

... whereas the following would be **CORRECT**:

```
$ cd /home/m111234/IC221/labs <= one level higher than lab12
$ ls
lab10/ lab11/ lab12/          <= here's the lab12 directory
$ ls lab12                    All (and ONLY) the files to be submitted are in the lab12 directory:
foo.h foo.cpp bar.h bar.cpp foobar.h foobar.cpp someobj.o ans.txt Makefile
$ /courses/stahl/etc/ic221/submit lab12 <= correct!
                                ↑ this is a space
```

WARNING: If you previously submitted the same lab, `submit` will ask if you want to continue, which *deletes the previous submission*. If you say no, the submission will abort and your previous submission will still be there. Only the most recent submission will be saved/graded.

Why are these instructions so explicit? Because your Lab/Project submissions are processed by a shell script that assumes common filenames. The script:

- Untars your most recent submission, creating a file named `m11xxxx.tar.txt` that lists the files you submitted.
- Renames `ans.txt` as `m11xxxx.ans.txt`.
- Copies test data files to the submission directory that was just untar'd.
- Builds your Lab/Project using the command: `make clean; make all`. Compiler output text, including warnings and errors are sent to a file named `m11xxxx.make.txt`
- Runs your program(s) using the test files, recording text written to `stdout` and `stderr` in a file named `m11xxxx.run.txt`
- Prints `Makefile`, `*.h`, `*.c`, `m11xxxx*.txt`

Your source code printout is then examined and marked up by hand.