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#####
# CS:APP Shell Lab
# Directions to Instructors
#
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```

This directory contains the files that you will need to run the CS:APP shell lab. The lab is the student's first experience with systems-level programming, and teaches them about processes, process control, and signals.

1. Overview

In this lab, students build a simple Unix shell with job control. They are given a skeleton called `tsh.c` (Tiny Shell) that implements some of the less interesting functions, and are then asked to implement the functions and signal handlers that provide job control.

Students evaluate the functionality of their shells using a trace-driven driver program called `sdriver.pl`.

The reference solution is in `./src/tsh.c`

2. Files

README

<code>grade/</code>	Autograding scripts
<code>shlab-handout/</code>	Handout directory that is given to the students
<code>src/</code>	Trace-driven driver program
<code>writeup/</code>	Sample Latex lab writeup

3. Building the Lab

To build the lab, modify the Latex lab writeup in `./writeup/shlab.tex` for your environment. Then type the following in the current directory:

```
unix> make clean
unix> make
```

The Makefile generates the driver code, formats the lab writeup, and then copies the driver code to the `shlab-handout` directory. Finally, it builds a tarfile of the `shlab-handout` directory (in `shlab-handout.tar`) which you can distribute to students. The command:

```
unix> make dist DEST=<DIR>
```

will copy the tarfile and copies of the writeup to directory <DIR>, where the students can access it.

4. Autograding the Lab

There is an autograding script that automatically grades the lab. See `./grade/README` for instructions.