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CSCI3731 – HW06

Homework 6

1. What are libraries good for?

Libraries are collection files packed into a single file. This is a convenient way to distribute and reuse compiled code. These code might be developed by some other developers and need to be used by you just via importing the libraries.

2. What are the two types of library and how are they different?

The two types of library include static and shared object library. While static library is linked into your executable just like a .o file, shared object library stays separate from executable, loaded at run time, shared by multiple executables.

3. Libjpeg is an open source library for reading and writing JPEG images. Use the code you have written in the previous homeworks and libjpeg to write a program that reads a PPM image and converts it to a JPEG. Make a new function that writes JPEGs and use it with your PPM reader function. JPEG is a compressed image format. Notice the different in file size between the PPM and JPEG image.
Hints:
- You might find instructions for downloading libjpeg and installing it yourself, maybe compiling it yourself. Don't do this. It is always better (and easier) to use a package manager to install software, as described in the text.
- You can find some good example code for writing JPEGs. Google "libjpeg example".
- libjpeg takes an rgbrgbrgb flat array of unsigned chars as input, so you can do this assignment without using 2D arrays. To be super cool, though, have your JPEG writer function take a 2D array of ints as input. If you haven't figured out 2D arrays, this is your chance to catch up, but get the JPEG writing working first.