Libraries

Class 11

Overview

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Announcements

- Python assignments due Dec 6
- Debug assignments due Dec 13
- Libraries assignments due Dec 20
- Projects due at the end of Dec 21
- Category totals are posted
  - Will be updated as assignments get graded

Review

- Static libraries go directly inside the executable
  - Libraries are an inherent part of the executable
- Dynamic/shared libraries are referred to by the executable
  - Libraries are loaded at load/runtime

Review

- Really easy to link a library
  - Toss `-lname` for a given library name e.g. `libname.so` or `libname.a` at the end of compilation command
  - (Linux) `-l:libname.a` is an explicit way to specify library file to link
  - `-Ldir` can specify additional directories to look for libraries
  - You can also link against a library by providing the path to the library file as an argument (particularly useful for static libraries)
- Creating a library
  - Create object code with `-c`
  - Dynamic object code requires `-fPIC` flag
  - Static: `ar rcs libname.a file.o`
  - Dynamic: `gcc -shared -o libname.so file.o`

Q&A

Basic assignment