

EECS 22L: Project 2 Grading Criteria

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The follow items are mandatory for the *alpha* version of the *OCR* program:

1. The basic OCR functions:

- Support for file I/Os, such as load an image file to the program, save the source code file on the disk drive, save the processed images, etc.
- Turn the colorful input image into black and white
- Increase the contrast, sharpness, and focus of the image
- Image cropping for a single character
- Image rotation for leveling
- Basic infrastructure for the character matching database, e.g. create a database, delete the database, clean the database, add an entry to the database, fill the content of the database with letters, digits, symbols, etc.
- AI support for character image pattern matching and optical character recognition
- Support for different fonts
- Handle images with different DPIs
- Support for vocabulary / word matching with the database
- A user interface for the program
- Unit test for different modules

Note: We are expecting **50%** of the above items to be implemented in the alpha version of your OCR program, and will grade them accordingly. Please state in the `README` file which of the following items are implemented in your program and how to use (test) them.

2. A well structured project folder with **compilable** source code files and corresponding documentations. Specifically, we are looking for:

- A complete and clean tarball with all the project files in proper directories
- Proper project file hierarchy (as what was presented in week3's discussion session)
- An `INSTALL` file with the descriptions of two installation options:
 - tarball extraction
 - CVS checkout information, i.e. linux command that can be used to get the project checkout

Proper instructions on how to install the program.

- A `README` file with the information of the authors, program version, date, and general information / description about the software.
Note: for the alpha version, please also state the basic functions that have been implemented in your program and how to use / test them. This is critical to the grading.
- A `COPYRIGHT` file with authors and copyright information
- A working top-level `Makefile` with at least three targets, i.e. 'all', 'test', and 'clean'.
Note: this file should be different from the `Makefile` in the `src` directory.

- The `src` directory with all the properly documented program source code files.
- The `bin` directory with the binary executable file of the OCR program.
- The `doc` directory with all the documentation files for this project, i.e. `OCR_SW_Spec.pdf`
- The `test` directory with the unit test modules, a Makefile for unit testing and, instructions on how to do the unit testing. **Note:** it is desirable to use the ‘make test’ target in the top-level makefile to execute all the test targets in the Makefile in the `test` directory.

Good luck and Happy Coding!