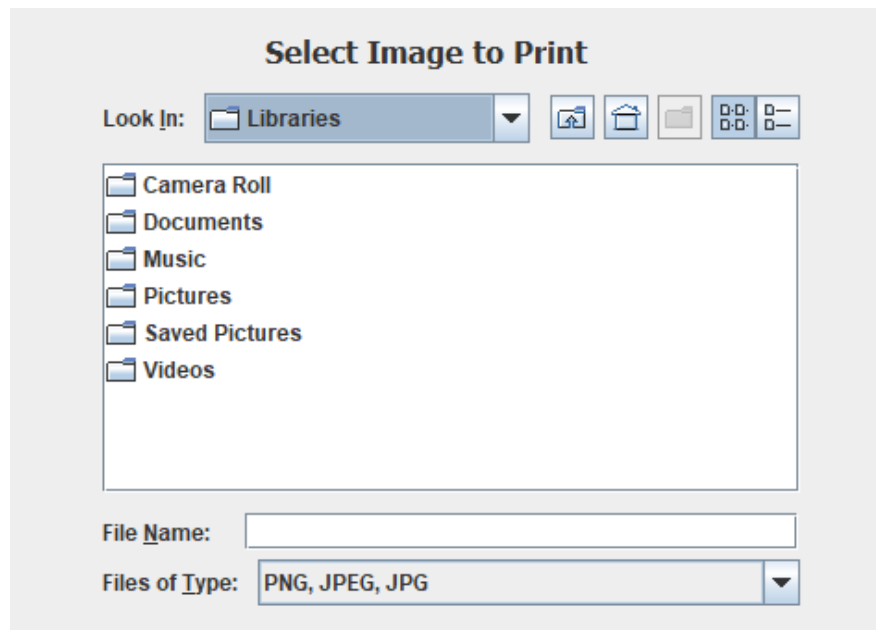


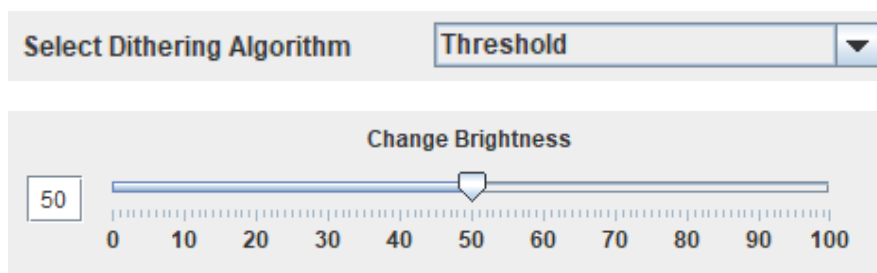
Criterion E: Evaluation

Success Criteria

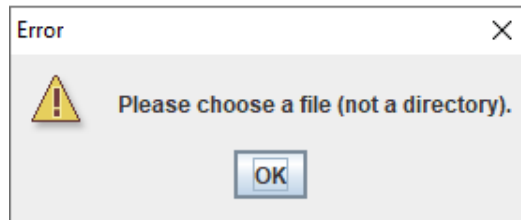
- One can chose what image to print from system.
 - ✓ Achieved using file selector in UI



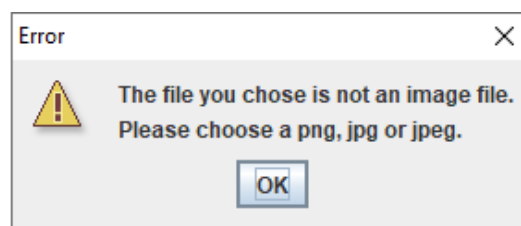
- The program is compatible with common image file formats (PNG, JPG, JPEG).
 - ✓ System is compatible with the mentioned file-types
- Chosen images can be reformatted to be printed, including resizing the image and converting into a binary image.
 - ✓ Conversion method (dithering algorithm) and brightness can both be chosen in UI.



- There are error messages when clients have invalid image selections
 - ✓ Error message when client does not choose a file (or chooses a directory)

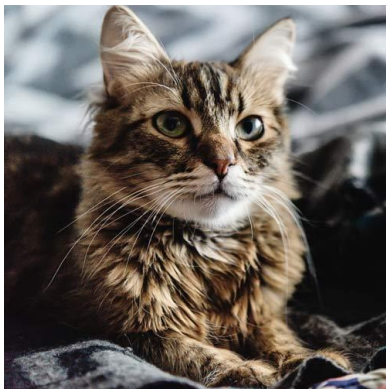


- ✓ Error message when the client chooses a non-image filetype



- The printer can print the image with the selected options.
 - ✓ Met. Examples:

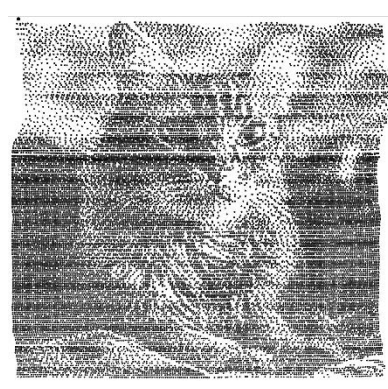
Jarvis, Judice & Ninke dithering, Brightness 50



1. Original

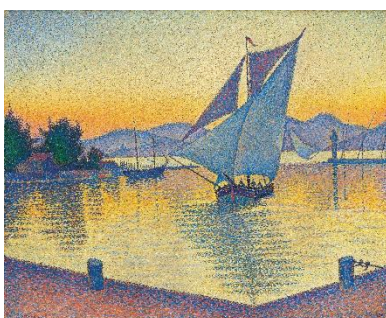


1. Preview



1. Print

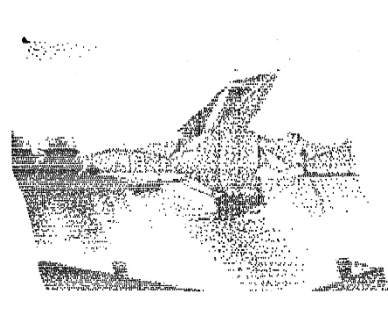
Floyd-Steinberg dithering, Brightness 52



2. Original



2. Preview



2. Print

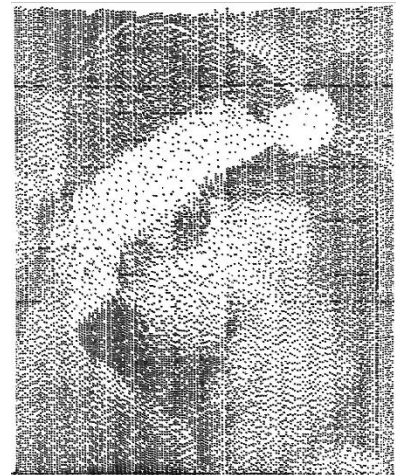
Burkes dithering, Brightness 50



3. Original

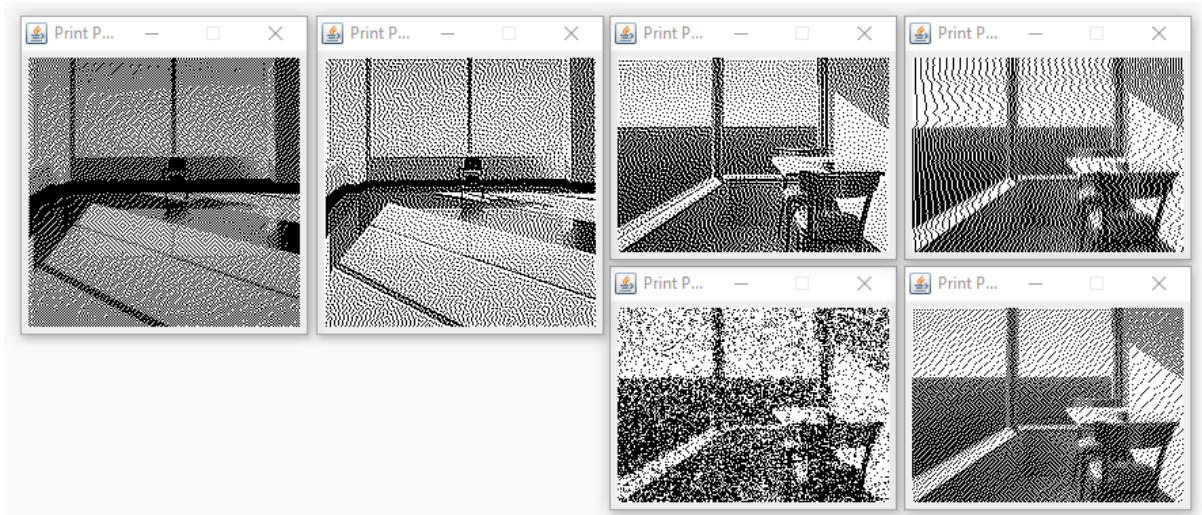


3. Preview



3. Print

- The program can create a print preview.
 - ✓ Met. Examples:



Previews

- The program has a simple user-friendly UI
 - ✓ UI approved by client during development

Recommendations for Further Development

Reduce shifting: while most of the shifting had been reduced, it still occurred in a few select cases (see top edges of *1. Print* and bottom edges of *2. Print*); cause could be identified through further troubleshooting and then resolved.

Reduce print time: printing a fully sized image took far longer than expected, with times ranging from 1 to 4 hours; this could be reduced by reworking the design of the printer (modifying gears and tweaking motor settings).

Custom dithering kernel: allow the user to input their own kernel to use when dithering the image; element could be added to UI.

Progress bar: client suggested adding a progress bar for current print; could be added to UI.