

SPECIFICATIONS

CHROMA



Gimp-like project

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Context:

This project is part of the **Professional Project** from Epitech, designed to simulate an internship workspace by developing software inspired by an existing one.

Description:

Chroma is an image editing software that allows various image manipulations like to create, edit or change the format of an image.

This project is inspired by the project GIMP (GNU Image Manipulation Program). We decided to go for a C/C++ stack, we are aiming for a small and compact but well-optimized application.

Objective:

Design a software to open many images formats, and edit them with various tools.

Specific objectives:

- ❖ Build a simple, yet pleasant interface
- ❖ Build a simple API to make different tools integration easier
- ❖ Ensure a fast and lightweight application to make the user experience more profitable
- ❖ Make image editing accessible for non-experienced user

Delay:

We follow the part-time duration, starting from October 20th to January 28th. This work is a 4 months-long project.

Functional description:

Chroma users can create, modify and customize an image through different tools and settings.

Here are a few following features examples :

Functionality	Description	Priority
Create/Load/Delete image	User is able to create/load/delete a picture	High ▾
Draw with pen/brush/etc	Imitate pen/brush behaviors using mouse	High ▾
Customise shortcuts	Custom keyboard and mouse shortcuts	Mid ▾
Crop/Cut/Resize	Modify image format	High ▾
Color picker	Able to copy color of a section/pixel	High ▾
Image format	Change image format (png, jpeg, jpg, etc...)	High ▾
Mirror	Mirror selection based on an axis	Mid ▾
Select	Select a picture or a set of pixels to apply specific modifications	High ▾
Text	Able to write text over picture	Low ▾
Shapes	Make a shape tool (rectangle, circle, ...)	Mid ▾
Fonts	Import fonts to use	Low ▾

Technical Stack

Chroma will be developed as a standalone software for Windows and Linux systems.

Programming Language:

→ C / C++

UI:

→ [Dear ImGui](#)

- ◆ a simple yet efficient immediate mode GUI library with strong customisation

Backend:

→ Magick++

- ◆ A C++ wrapper for ImageMagick, for format conversion

→ SDL3

- ◆ For main rendering and GPU Acceleration features