

Project5 Design

☰ Property	
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Project 5 Preliminary Design

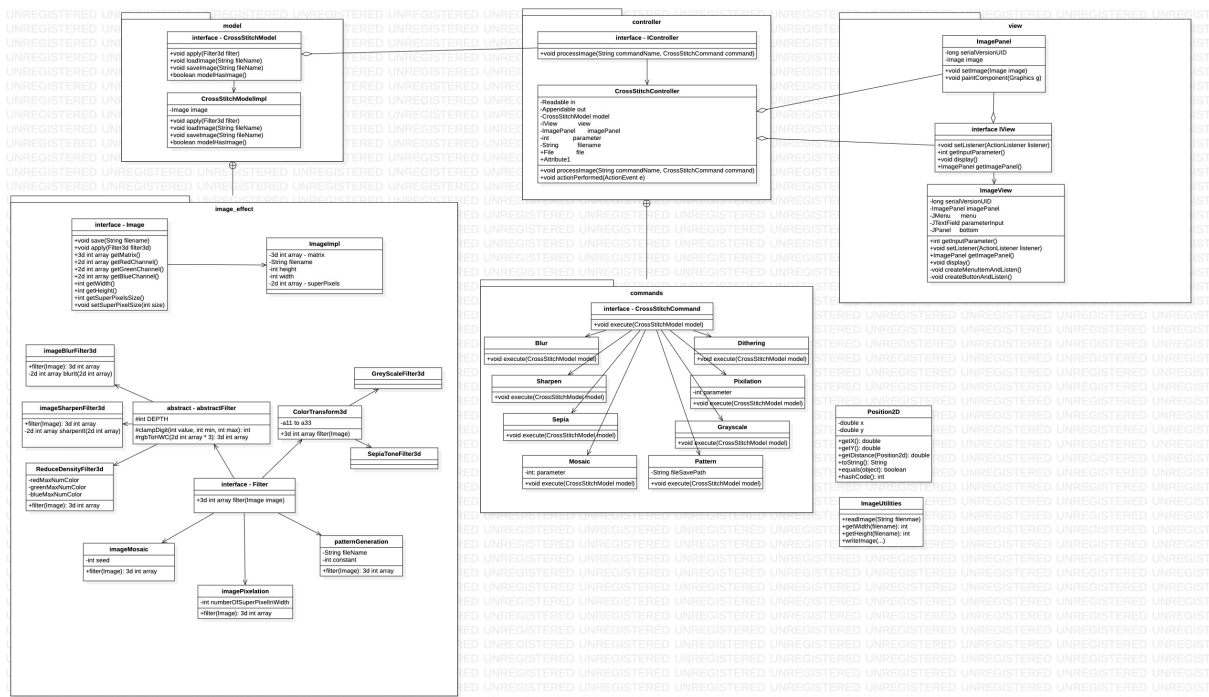
Goal

In this final project, we build a view for cross-stitch pattern generator featuring a graphical user interface.

In this application, the user will be able to load, process, and save images and use these images to generate cross stitch patterns.

In addition to a program that the user can interact with, they should also be able to use batch scripting from the previous project.

UML Design



- Here we apply the classic MVC pattern where the **model** and **view** are independent from each other. And the **controller** will be the one who's responsible for connecting these two parts.
- The main parts from project3 and project4 are reserved or slightly modified.
- The view part will contain three things:
 1. an **IView** interface to specify what a view class shall contain.
 2. an **ImageView** concrete class implements the **IView** interface and uses (extends) **JFrame**.
 3. an **ImagePanel** concrete class which extends from **JPanel** to make **JFrame** work correctly.




Testing plans:

The goal of testing controller is to make sure it call the right method when received a command.




So we achieve this by building a mock model that does nothing and serves as a place holder.

test controller with menu click

Aa Name	≡ Input	≡ Expected
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 Name	 Input	 Expected
<u>test load image</u>	mimic menu click	a system.out string
<u>test save image</u>	mimic menu click	a system.out string
<u>test blur image</u>	mimic menu click	a system.out string
<u>test sharpen image</u>	mimic menu click	a system.out string
<u>test greyscale image</u>	mimic menu click	a system.out string
<u>test sepia image</u>	mimic menu click	a system.out string
<u>test dithering image</u>	mimic menu click	a system.out string
<u>test mosaics image</u>	mimic menu click	a system.out string
<u>test pixelate image</u>	mimic menu click	a system.out string

test controller with batch script

 Name	 Input	 Expect
<u>test with invalid batch file</u>	give a nonexistent txt file	a system.out string
<u>test with invalid command</u>	give a file with invalid command	a system.out string
<u>test with non-exist image</u>	command include load a non existing image	a system.out string
<u>test each command</u>	give a text file with different commands	a system.out string