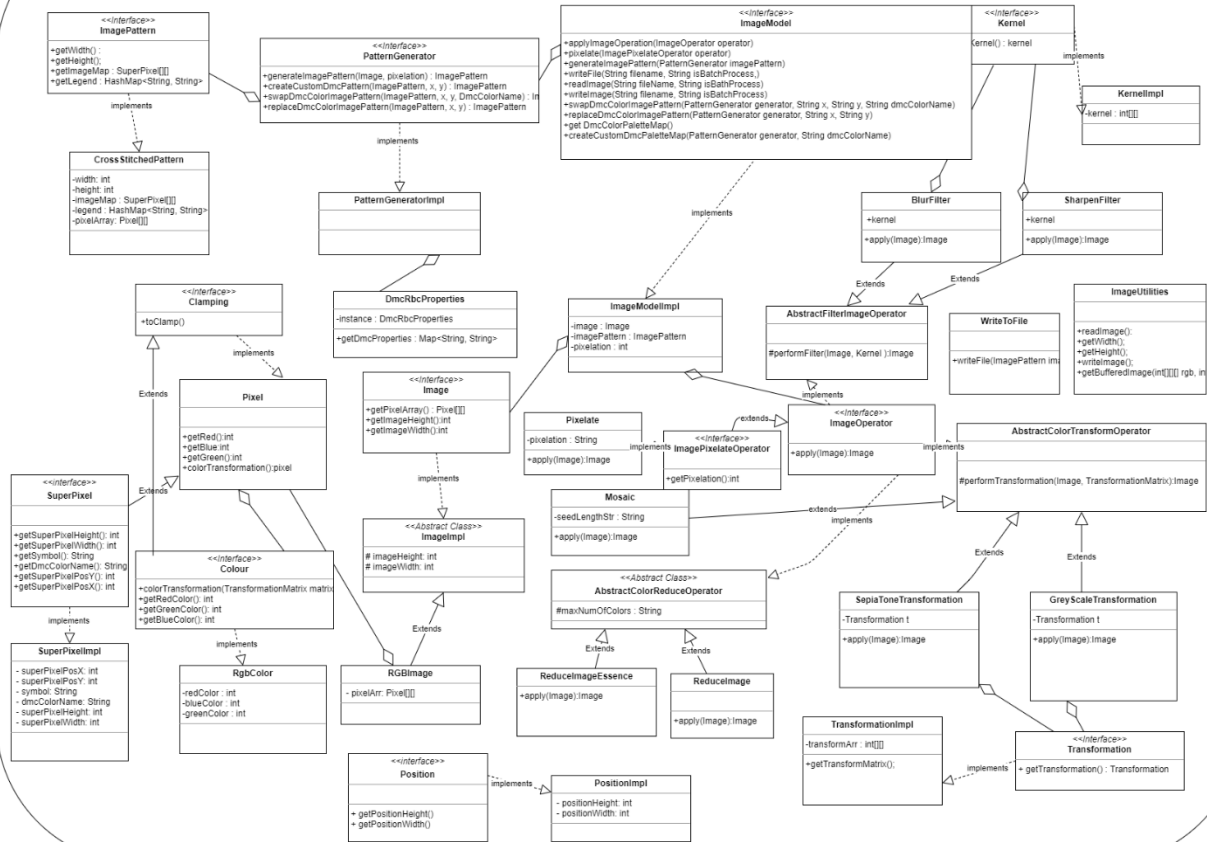


MODEL



Design Assumptions:

- 1) If invalid input or invalid command is encountered then display the message in GUI for batch file execution and further commands will not be executed.
- 2) Keep the file in the res/input while executing the batch file from command line.
- 3) Output will be generated in res/output.
- 4) DMC is assumed to be 489 colors as provided in the project description.
- 5) Unicode characters will be used to represent the symbols for cross stitched pattern.
- 6) Only known commands will be executed and invalid commands will be returned as invalid command.
- 7) Height and width of the image should not be less than 10 pixels across.
- 8) Pattern generation is not doing pixelation, so it is expected to pixelate and then call pattern from GUI and console.
- 9) Pixelation parameter cannot be less than height and width of the image.
- 10) Pixelation parameter cannot be negative.
- 11) Input seed for mosaic cannot be greater than the product of image height and width.
- 12) Mosaic parameter cannot be negative.
- 13) If invalid input or invalid command is encounter then display the message in console and stops the execution.
- 14) Filename will be validated on execution and not in constructor of command pattern design.
- 15) Input parameters will be validated in Model to support both batch script and gui.
- 16) Only .png or .jpg via save is supported.
- 17) Only text file is supported for pattern generation.
- 18) User can load and save from any location from GUI.
- 19) It is expected to load a file and then perform the image operation or cross stitched pattern operation.
- 20) Two separate controller one for console or commanline execution and other to support GUI interaction. Code duplication is handled using AbstractImageController reusing the command design pattern to perform common operations of batch file and GUI.

TestCases :

Test Case	Test Case Description	Expected Result
testLoadFile	Test to verify whether controller is calling the correct view function on loading file operation.	Input log to be verified whether it contains the desired string or not
testBlur	Test to verify whether controller is calling the correct view function on blur operation.	Input log to be verified whether it contains the desired string or not
testSharpen	Test to verify whether controller is calling the correct view function while performing Sharpen operation.	Input log to be verified whether it contains the desired string or not

testSepiaTone	Test to verify whether controller is calling the correct view function while performing SepiaTone operation.	Input log to be verified whether it contains the desired string or not
testGreyScale	Test to verify whether controller is calling the correct view function while performing GreyScale operation.	Input log to be verified whether it contains the desired string or not
testDither	Test to verify whether controller is calling the correct view function while performing Dither operation.	Input log to be verified whether it contains the desired string or not
testMosaic	Test to verify whether controller is calling the correct view function while performing Mosaic operation.	Input log to be verified whether it contains the desired string or not
testPixelate	Test to verify whether controller is calling the correct view function while performing Pixelate operation.	Input log to be verified whether it contains the desired string or not
testSaveFile	Test to verify whether controller is calling the correct view function while performing SaveFile operation.	Input log to be verified whether it contains the desired string or not
testPattern	Test to verify whether controller is calling the correct view function while performing Pattern operation.	Input log to be verified whether it contains the desired string or not
testSwapDmcColor	Test to verify whether controller is calling the correct view function while performing SwapDmcColor operation.	Input log to be verified whether it contains the desired string or not
testRemoveDmcColor	Test to verify whether controller is calling the correct view function while performing RemoveDmcColor operation.	Input log to be verified whether it contains the desired string or not
testSavePattern	Test to verify whether controller is calling the correct view function while performing SavePattern operation.	Input log to be verified whether it contains the desired string or not
testExecuteBatch	Test to verify whether controller is calling the correct view function while performing ExecuteBatch operation.	Input log to be verified whether it contains the desired string or not
testFilterImage	Test to verify whether controller is calling the correct model	Input log to be verified whether it contains the desired string or not

	function while performing FilterImage operation.	
testTransformImage	Test to verify whether controller is calling the correct model function while performing TransformImage operation.	Input log to be verified whether it contains the desired string or not
testReduce	Test to verify whether controller is calling the correct model function while performing Reduce operation.	Input log to be verified whether it contains the desired string or not
testPixelate	Test to verify whether controller is calling the correct model function while performing Pixelate operation.	Input log to be verified whether it contains the desired string or not
testCreateMosaic	Test to verify whether controller is calling the correct model function while performing CreateMosaic operation.	Input log to be verified whether it contains the desired string or not
testGenerateImagePattern	Test to verify whether controller is calling the correct model function while performing GenerateImagePattern operation.	Input log to be verified whether it contains the desired string or not
testWriteFile	Test to verify whether controller is calling the correct model function while performing WriteFile operation.	Input log to be verified whether it contains the desired string or not
testReadImage	Test to verify whether controller is calling the correct model function while performing ReadImage operation.	Input log to be verified whether it contains the desired string or not
testWriteImage	Test to verify whether controller is calling the correct model function while performing WriteImage operation.	Input log to be verified whether it contains the desired string or not
testGetBufferedImage getCrossStichedPatternInfo	Test to verify whether controller is calling the correct model function while performing GetBufferedImagegetCrossStichedPatternInfo operation.	Input log to be verified whether it contains the desired string or not
testSwapDmcColorImagePattern	Test to verify whether controller is calling the correct model function while performing SwapDmcColorImagePattern operation.	Input log to be verified whether it contains the desired string or not

testReplaceDmcColorImagePattern	Test to verify whether controller is calling the correct model function while performing ReplaceDmcColorImagePattern operation.	Input log to be verified whether it contains the desired string or not
testGenerateCrossImagePattern	Test to verify whether controller is calling the correct model function while performing GenerateCrossImagePattern operation.	Input log to be verified whether it contains the desired string or not