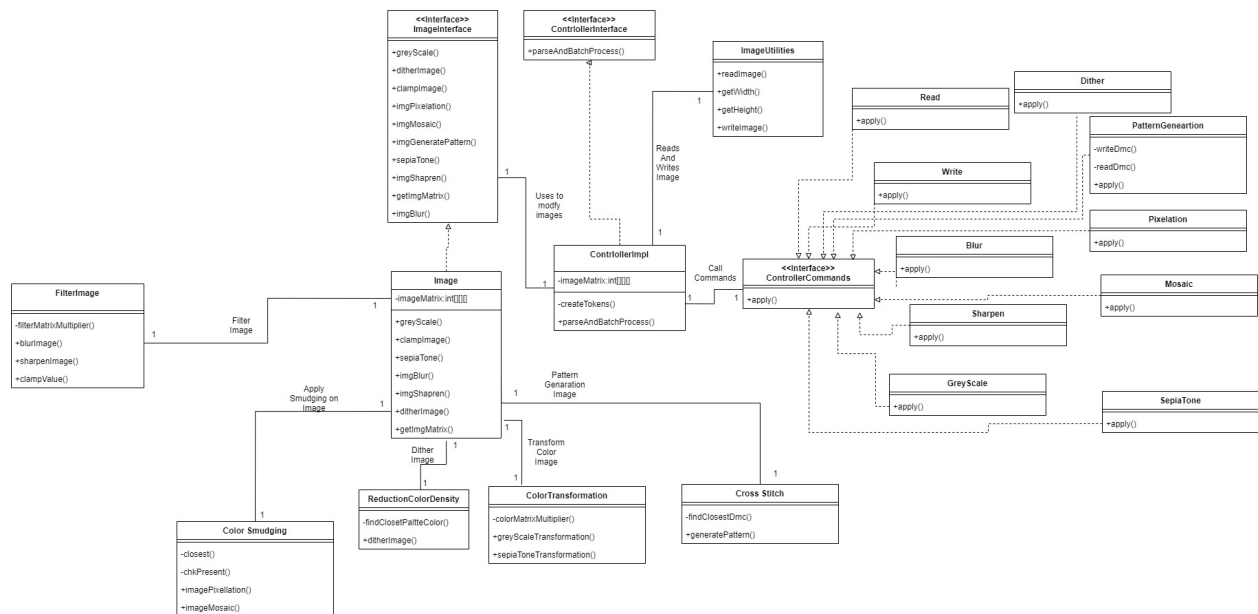# Project 4:Cross-Stitch Controller

UML:

Changes made:

- I have added a new classes which perform mosaic called Mosaic, pixelation of images called Pixelation and a class called PatternGeneartation which generates the cross stitch pattern .
- I have also added a new interface for Controller and implementation of the interface of the controller. This controller will carry out the batch processing.
- In the controller I have a method called parseAndProcess which reads the input file provided to the controller, and it parses the text file and carries out batch processing.
- I have added a new interface called controller commands interface and classes for various commands supported by the controller.

Testing of the controller:

Test cases for controller:

Test Case for controller		Expected output
Trying to perform operations without reading the image.	dither	IllegalStateException
Performing dither after reading the image	Read image.jpg Dither Write ouput_Image.jpg	Image Read Dither successfully performed Image Written
Performing greyscale after reading the image	Read image.png GreyScale Write ouput_Image.jpg	Image Read GreyScale successfully performed Image Written
Performing Sepia Transformation after reading the image	Read image.jpg Sepia Write ouput_Image.jpg	Image Read Sepia transformation successfully performed Image Written
Performing blur after reading the image	Read image.jpg blur Write ouput_Image.jpg	Image Read Blur successfully performed Image Written
Performing sharpen after reading the image	Read image.jpg sharpen Write ouput_Image.jpg	Image Read Sharpen successfully performed Image Written
Performing mosaic after reading the image	Read image.jpg mosaic Write ouput_Image.jpg	Image Read Mosaic successfully performed Image Written
Performing pattern after reading the image	Read image.jpg Generate pattern Write ouput_Image.jpg	Image Read Pattern Generated Successfully Performed Image Written
Performing pixelation after reading the image	Read image.jpg pixelation Write ouput_Image.jpg	Image Read Pixelation successfully performed Image Written
Performing two operation on	Read image.jpg	Image Read

the same image	greyscale pixelation Write ouput_Image.jpg	GreyScale successfully performed Pixelation successfully performed Image Written
Testing Read Image	Read image.jpg Write ouput_Image.jpg	Image Read Image Written
Testing write image without reading	Write ouput_Image.jpg	IllegalStateException
Writing image after reading	Read image.jpg Write ouput_Image.jpg	Image Read Image Written
Passing wrong file name	Read image2.jpg	IllegalArgumentException
Writing Image without reading	Write ouput_Image.jpg Read image.jpg	IllegalStateException
Carrying out multiple read and write and operations.	Read image.jpg greyscale pixelation Write ouput_Image.jpg Read image2.jpg greyscale pixelation Write ouput_Image2.jpg	Image Read GreyScale successfully performed Pixelation successfully performed Image Written Image Read GreyScale successfully performed Pixelation successfully performed Image Written