Test Plan

Controller – edge case:

Testing different commands	Testing situation	Expected value
"q" & "quit"	inputStream = "q" or "quit"	Terminate the program, aka nothing happens
"load goat.png"	inputStream = "load goat.png"	Model.image = same image from the goat.png `No such image` if file does not exist
"load"	inputStream = "load"	`IllegalArgumentException("Null or blank file name found");`
"save goat_save_test.png"	inputStream = "load goat.png save goat_save_test.png"	Model.image is saved as goat_save_test.png
"save"	inputStream = "save"	`IllegalArgumentException("Null or blank file name found");`
"blur", "sharpen", "grey", "sepia", "reduce", "dither", "mosaic", "pixelate", "pattern", "check"	Called these commands before image was loaded	`IllegalArgumentException("No image loaded");`

Controller – Filter related case:

Testing different commands	Testing situation	Expected value
"blur"	inputStream = "load goat.png blur save goat_blur.png"	goat.png is intact, goat_blur.png has been created with goat.png blurred once
"sharpen"	inputStream = "load goat.png sharpen save goat_ sharpen.png"	goat.png is intact, goat_sharpen.png has been created with goat.png sharpened once

Controller – Transform related case:

Testing different commands	Testing situation	Expected value
"grey"	inputStream = "load goat.png grey save goat_grey.png"	goat.png is intact, goat_grey.png has been created with goat.png grey scaled
"sepia"	inputStream = "load goat.png sepia save goat_ sepia.png"	goat.png is intact, goat_ sepia.png has been created with goat.png transformed to sepia

Controller – Reduce related case:

Testing different commands	Testing situation	Expected value
"reduce 8"	inputStream = "load goat.png reduce 8 save goat_reduce8.png"	goat.png is intact, goat_reduce8.png has been created with goat.png reduced to 8 colors per color channel
"reduce 0"	inputStream = "load goat.png reduce 0"	IllegalArgumentException("Invalid reduce colors");
"reduce 256"	inputStream = "load goat.png reduce 256"	IllegalArgumentException("Invalid reduce colors");
"reduce a" non-integer entered as next input	inputStream = "load goat.png reduce a"	InputMismatchException
"reduce"	inputStream = "load goat.png reduce"	NoSuchElementException
"dither 8"	inputStream = "load goat.png dither 8 save goat_dither8.png"	goat.png is intact, goat_dither8.png has been created with goat.png reduced to 8 colors per color channel and dithering has been applied
"dither 0"	inputStream = "load goat.png dither 0"	IllegalArgumentException("Invalid reduce colors");
"reduce 256"	inputStream = "load goat.png dither 256"	IllegalArgumentException("Invalid reduce colors");
"dither a" non-integer entered as next input	inputStream = "load goat.png dither a"	InputMismatchException
"dither"	inputStream = "load goat.png dither"	NoSuchElementException

Controller – Mosaic & Pixelate:

Testing different commands	Testing situation	Expected value
"mosaic 10"	inputStream = "load goat.png Mosaic 10 save goat_mosaic10.png"	goat.png is intact, goat_mosaic10.png has been created with goat.png applied with mosaic with 10 clusters
"mosaic 0"	inputStream = "load goat.png Mosaic 0"	IllegalArgumentException("Seed cannot be less than 1");
"mosaic 99999999" seed size is more than the total pixel of the image	inputStream = "load goat.png Mosaic 99999999"	IllegalArgumentException("Too many seeds");
"mosaic a" non-integer entered as next input	inputStream = "load goat.png mosaic a"	InputMismatchException
"mosaic"	inputStream = "load goat.png mosaic"	NoSuchElementException
"pixelate 10"	inputStream = "load goat.png pixelate 10 save goat_ pixelate10.png"	goat.png is intact, goat_ pixelate10.png has been created with goat.png applied with pixelate with 10 super pixel per row
"pixelate 0"	inputStream = "load goat.png pixelate 0"	IllegalArgumentException("numOfSquares cannot be less than 1");
"pixelate 99999999" seed size is more than the total pixel of the image	inputStream = "load goat.png pixelate 99999999"	IllegalArgumentException("Too many numOfSquares");
"pixelate a" non-integer entered as next input	inputStream = "load goat.png pixelate a"	InputMismatchException
"pixelate"	inputStream = "load goat.png pixelate"	NoSuchElementException

Controller – Pattern:

Testing different commands	Testing situation	Expected value
"pattern 10"	inputStream = "load goat.png Pattern 10"	goat.png is intact a cross stitch pattern of this pixelated image has been created and stored in the model
"pattern a"	inputStream = "load goat.png Pattern a"	InputMismatchException
"pattern"	inputStream = "load goat.png Pattern"	NoSuchElementException
"export"	inputStream = "export"	NoSuchElementException
"export pattern.txt"	inputStream = "export pattern.txt"	goat.png is intact a cross stitch pattern of this pixelated image has saved as pattern.txt
"checkp"	inputStream = "checkp"	If pattern was never called, return IllegalStateException, if it was called, do nothing

Controller – Mock model:

Testing different commands	Testing situation	Expected value
"load goat.png"	inputStream = "load goat.png"	Print "load called with goat.png"
"save goat.png"	inputStream = "save goat.png"	Print "save called with goat.png"
"blur"	inputStream = "blur"	Print "blur called"
"sharpen"	inputStream = "sharpen"	Print "sharpen called"
"grey"	inputStream = "grey"	Print "grey called"
"sepia"	inputStream = "sepia"	Print "sepia called"
"reduce 10"	inputStream = "reduce 10"	Print "reduce called with 10"
"dither 10"	inputStream = "dither 10"	Print "dither called with 10"
"mosaic 10"	inputStream = "mosaic 10"	Print "mosaic called with 10"
"pixelate 10"	inputStream = "pixelate 10"	Print "pixelate called with 10"
"pattern 10"	inputStream = "pattern 10"	Print "pattern called with 10"
"switch a string"	inputStream = "switch a string"	Print "switchDmc called with a string"
"export pattern.txt"	inputStream = "export pattern.txt"	Print "export called with pattern.txt"
"check"	inputStream = "check"	Print "check called"
"checkp"	inputStream = "checkp"	Print "checkp called"