***Project Specification(informal)***

The Main idea of our GSP is to take any image(.png or .jpg) and print it in ASCII art Takes an image and resizes it to a user imputed dimension. It then asks whether the user wants in color or black and white. It then uses a recursive function to check and average each pixel's RGB value. It then calls a second function which assigns the pixel a character based off of the average RGB value of the pixel. After that it adds that character to a list, when it reaches the last pixel horizontally it combines the list into one string and prints it out. It redoes this function until every single horizontal line has been printed/examined. For example if the pixel's average RGB value is under a certain number, it is assigned the “@” character.

Webcam---> The webcam uses an open CV to access the computer camera. Whenever the space bar is pressed it takes a screenshot of the webcam image displayed. It then runs this image through the converter and prints it out.

Modules---> Constants in the code are changed to variables so it doesnt need to be hardcoded. The code is changed into a module where you can import it and call your own function and call your own function. The three functions are ASCII\_module.convert\_ASCII(image, imgx, col), ASCII\_module.convert\_photo(image, imgx), ASCII\_module.convert\_cam(imgx, col, type). The first one converts an image into regular ASCII art, the first parameter is the image link, the second is the image dimension, and the third is choosing whether it's black&white or colour. The second function converts an image to the console using the '■'character, this image will always be in colour. The first parameter is the image link and the second is the dimensions. The third function takes a screenshot with the webcam and converts it into ASCII Art. The first parameter is size/dimension, the second is colour, and the third is chooses whether it prints into ASCII arty or the '■'character.