Assignment 4

Task 1

Task 1 is to create a function putPixmap which takes four arguments. The purpose of this function is to put a small pixmap onto another bigger pixmap.

The code is as below:

```
# place src into dst with upper left at (x,y) in dst
def putPixmap( dst, src, x, y ):
 # loop over each row i
 for i in range( src.getHeight() ):
  # loop over each column j
  for j in range( src.getWidth() ):
   # from src, get the (r, g, b) value at pixel (j, i)
   ( r, g, b ) = src.getPixel( j, i )
   # in dst, set location (x + j, y + i) to (r, g, b)
   dst.setPixel( x + j, y + i, ( r, g, b ) )
 # return
 return
```

Task 2

This task is to create 3 mor functions like swapRedBlue that edit the colors in a Pixmap. I have created a few more, and for the picture of it, please refer to extensions

Task 3

This task is to put 4 copies of the smaller Pixmap and put it into the bigger Pixmap. For this task, I have done some more extensions on it, so please refer to extensions

Task4

I am changing the blue screen behind my picture into another color. I have divided it into 4 quadrants, and changed its color. The picture

produced:

Extensions

I have undertook a few of the extensions unconsciously, I was excited to create several effects. One of them is putting myself onto a scene. I
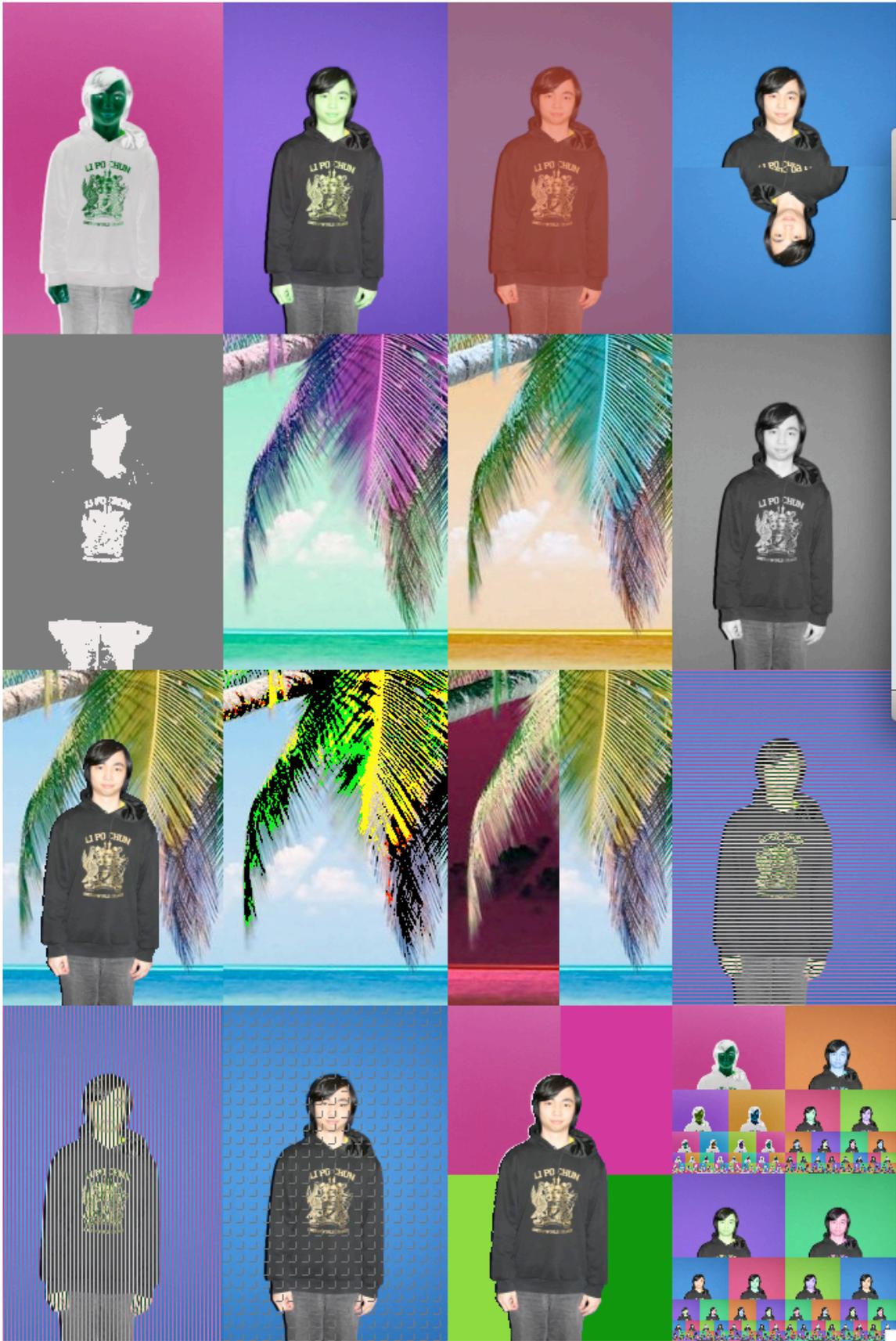
chose to put myself by the beach:

Also, I went on to create a bigger Warhol style collage, and also enable my Warhol program to read in multiple images from the command line.

The command is:

```
python lab4.py <nameOfPicture1.ppm> <nameOfPicture2.ppm>
```

This essentially allows people to put different images onto the Warhol collage.

My collage:
I placed the beach in the middle of the collage, and did some alternation. I then placed myself surrounding the beach. One special picture is the most lower-right. I have half of myself, with different effects, and it spiral down till it is very small.

Conclusion

I have learned to make wonderful effects to a picture by writing simple codes. I also learned that sometimes it is hard to actually make an effect work, due to the positioning and the colors of the pixels. Finally, I learned how to put myself onto any scene, given a simple colored background.