**E/19/129**

**K.H. Gunawardana**

**CO543 – Image Processing – Lab 1**

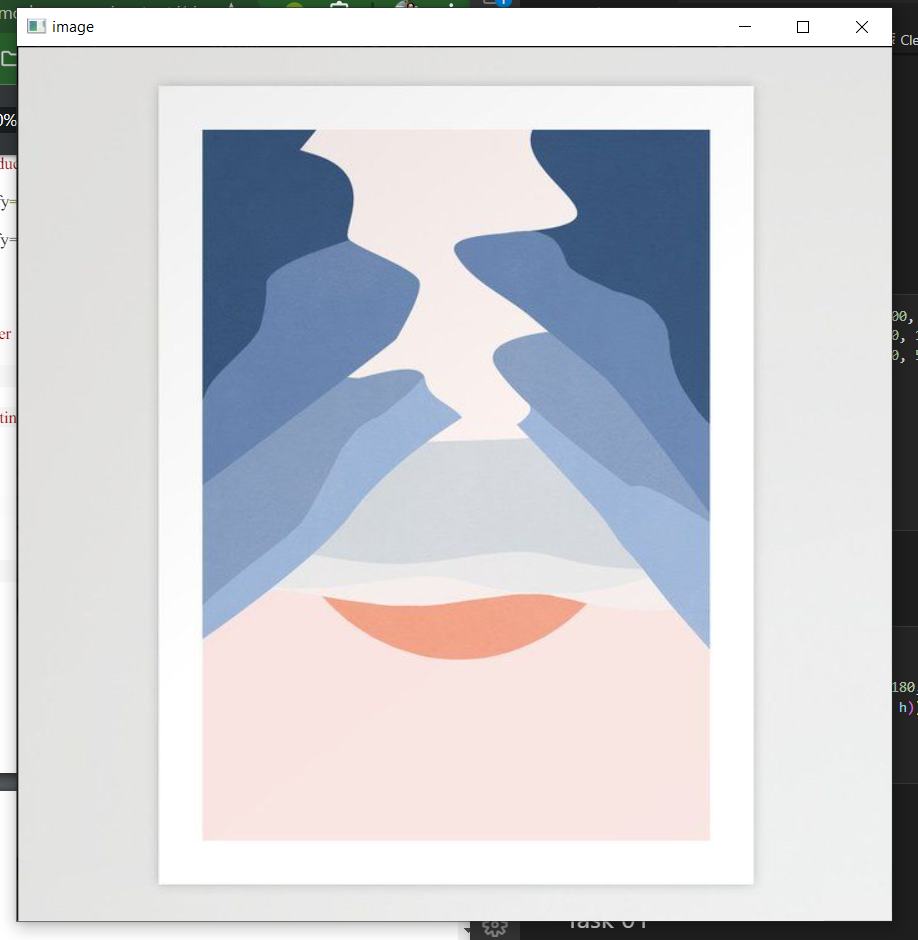
**Implement basic image processing functions using Python-OpenCV**

* Resizing

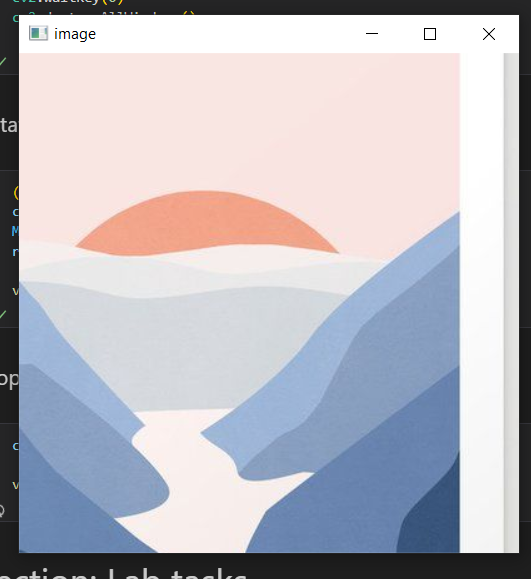
A screenshot of a computer

Description automatically generated

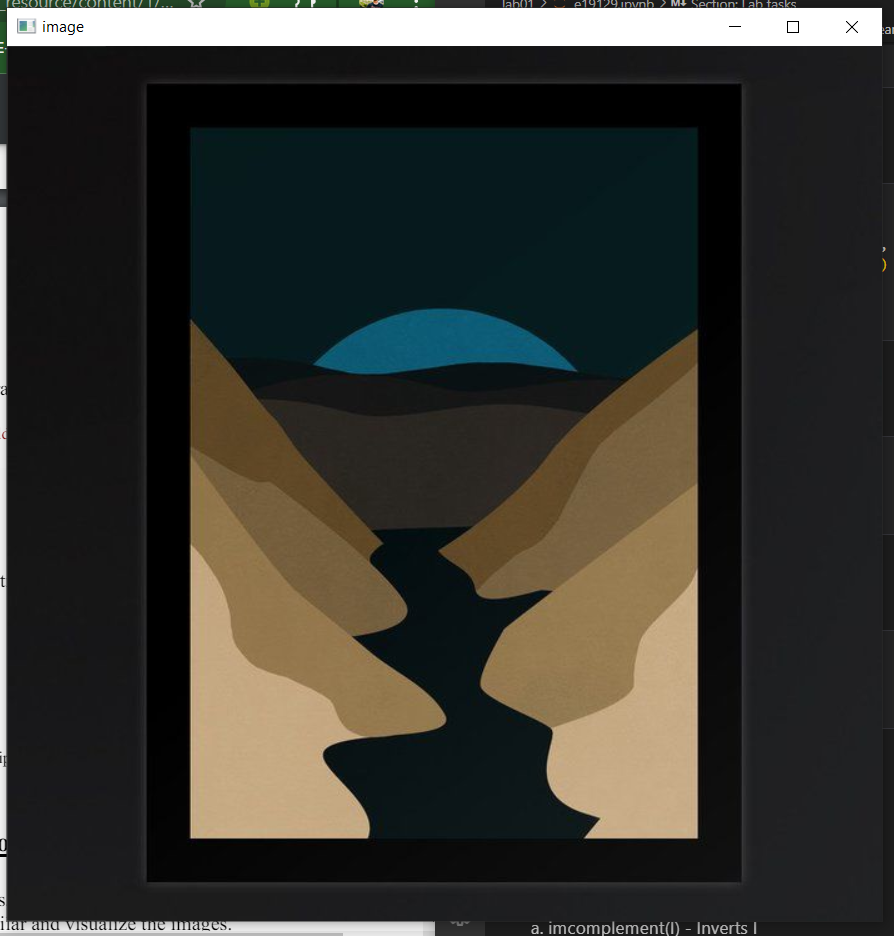
* Rotation



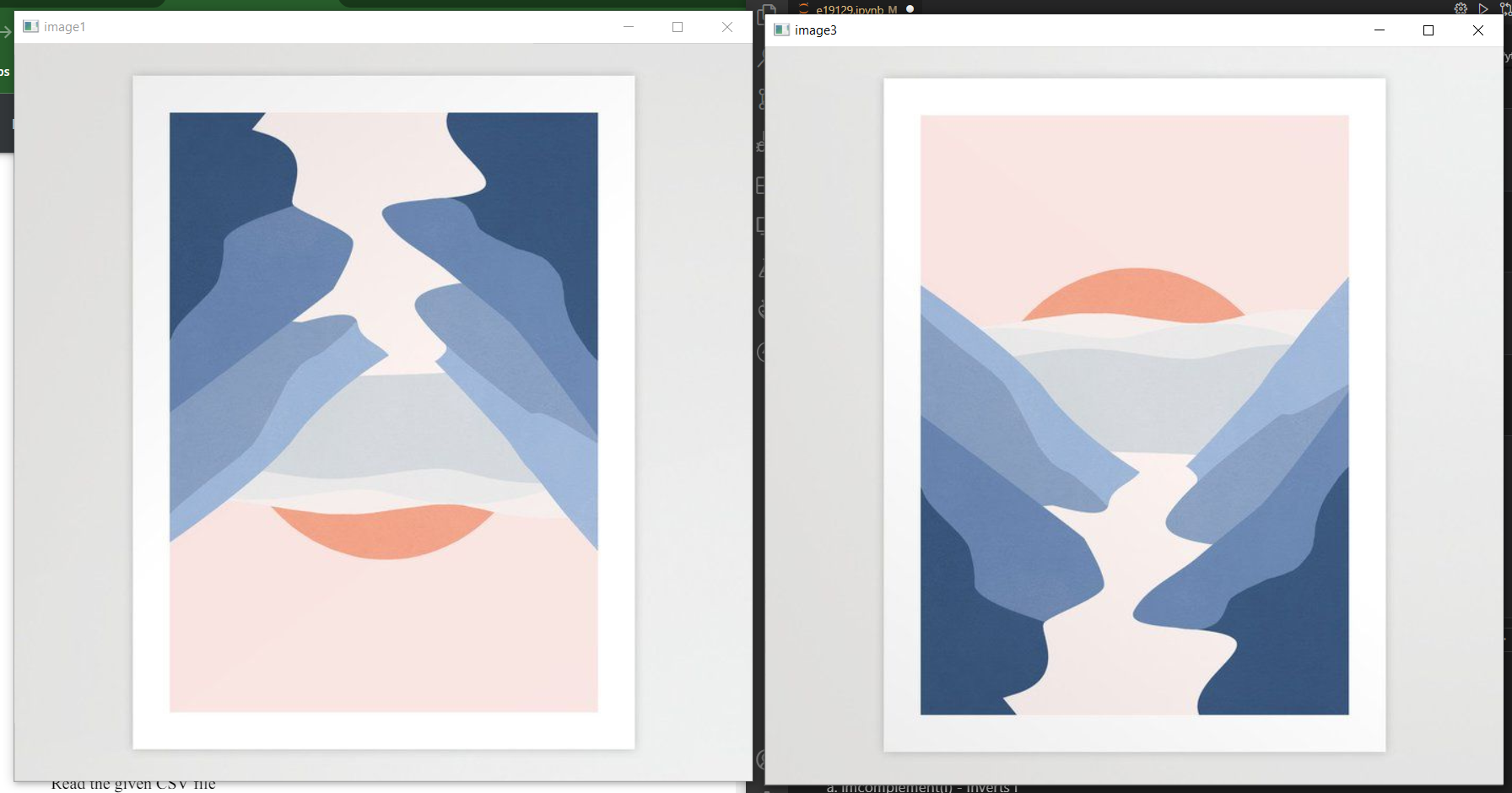
* Cropping



* Complementing



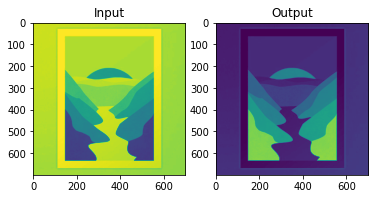
* Flipping an image



**Task 01**

**Implement the following functions on your own using PythonOpenCV.**

1. imcomplement(I) - Inverts I

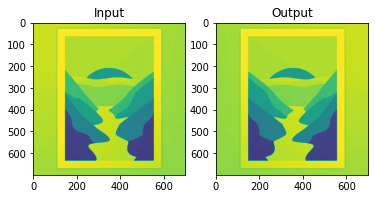


1. flipud(I) - Flips image along x-axis

A green and blue rectangles with a black background

Description automatically generated

1. fliplr(I) - Flips image along y-axis



1. imresize(I,[x y]) with nearest-neighbour interpolation

A green and blue picture

Description automatically generated with medium confidence

**Task 02**

**Implement the 4 geometric transformation functions using OpenCV in addition to the given example.**

* Translation

A picture of a river and mountains

Description automatically generated

* Shearing - Horizontal

A picture of a river and mountains

Description automatically generated

* Shearing – Vertical

A picture of a river and mountains

Description automatically generated

* Scaling

