UNIVERSIDAD DE GRANADA

TVG

Practica 2

Alumno	Abdullah Almusawi
Profesor	ALEJANDRO JOSE
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Versión	1.0

Mean and Median

Salt and Pepper Noise 1

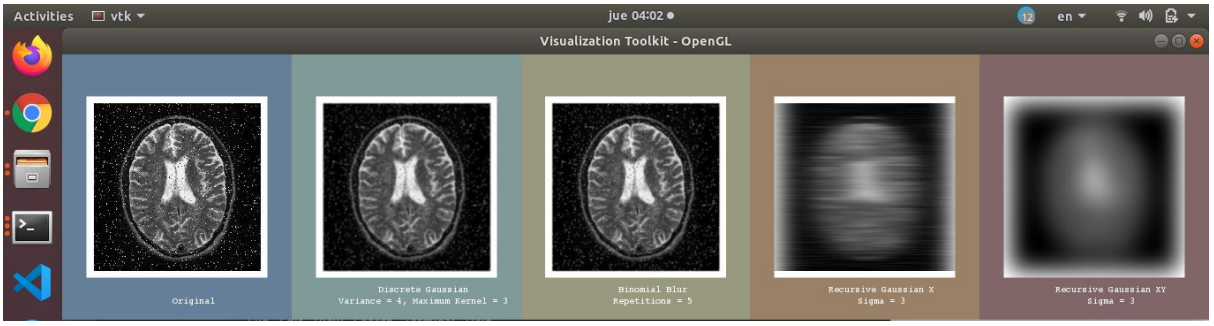
Salt and Pepper Noise 2

Gaussian Noise

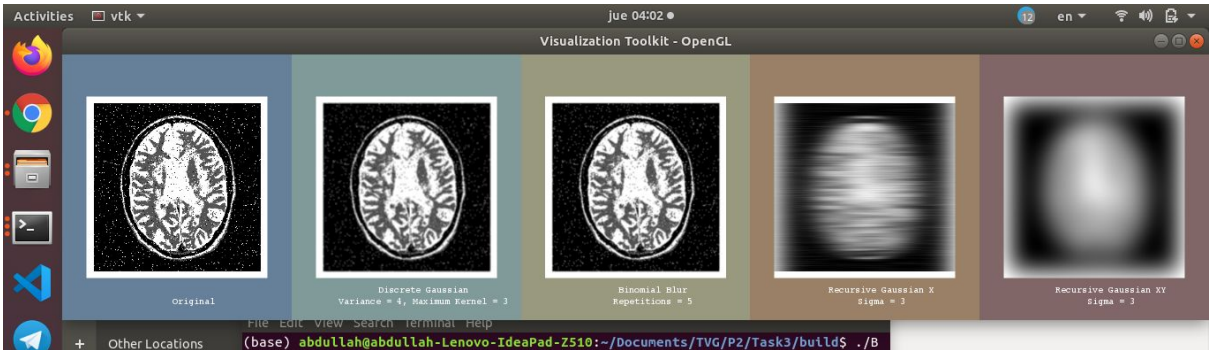
We see how the median filter is the one that best behaves when it comes to removing noise from the salt and pepper type (with a neighborhood of 5x5 it almost completely erases it), however it does not work too well with Gaussian noise and can join edges .

Smoothing Filters

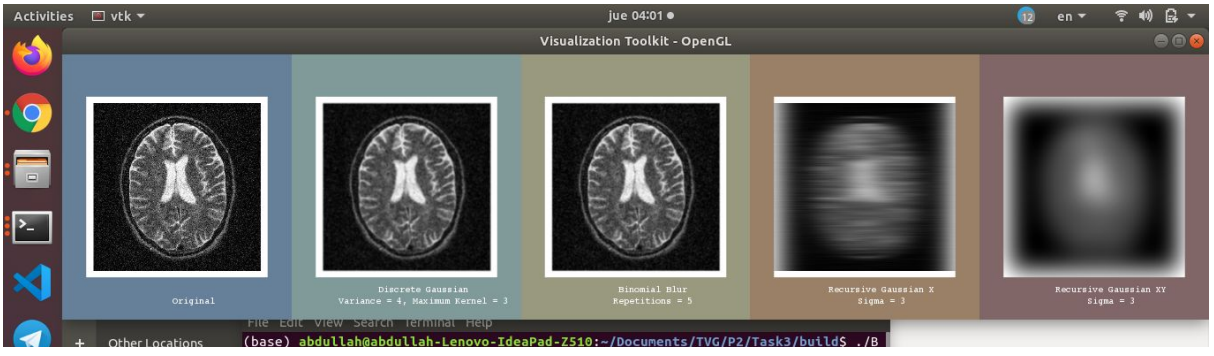
Salt and Pepper Noise 1



Salt and Pepper Noise 2



Gaussian Noise

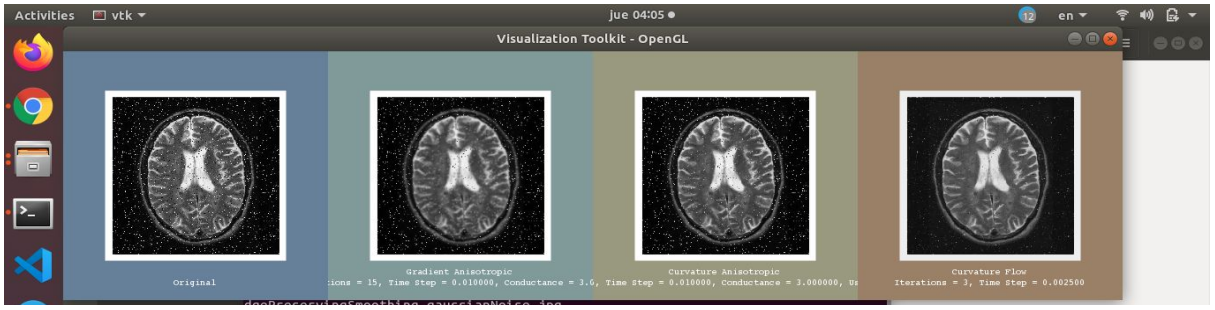


Smoothing filters, unlike the median filter, do not behave well with salt and pepper noise, but with Gaussian noise. The values that have to be given must be very specific for each image

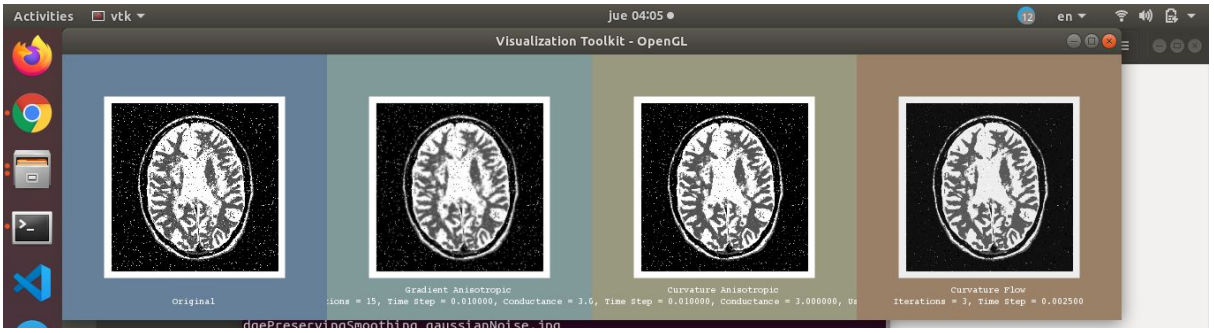
because they change its effect enormously from one another. For example you can see how the last two gaussian recursive filters, with a high sigma it can spoil the image a lot.

Edge Preserving Smoothing

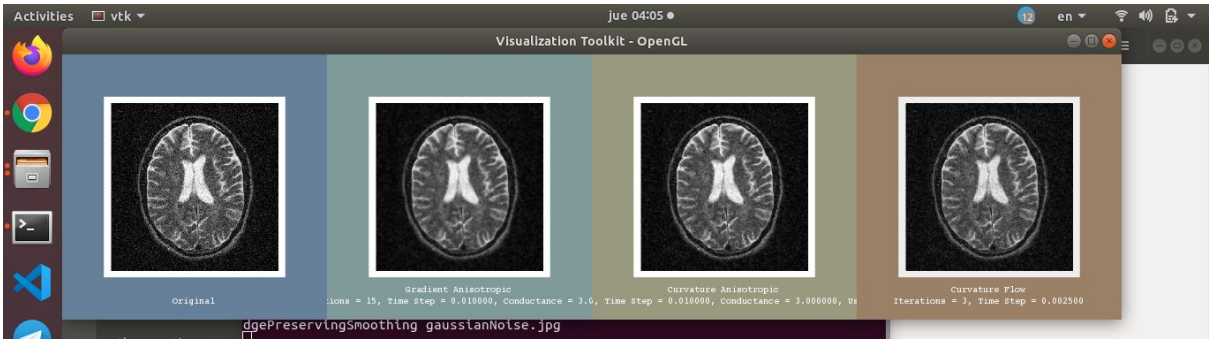
Salt and Pepper Noise 1



Salt and Pepper Noise 2



Gaussian Noise



Edge preserving filters, like smoothing, do not behave well with salt and pepper type noise but with Gaussian noise, where, in addition, being adaptive, it takes edges into account when filtering.