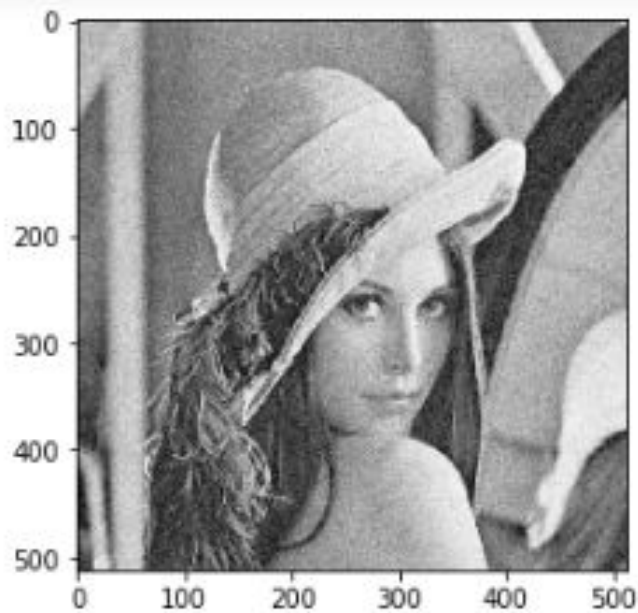


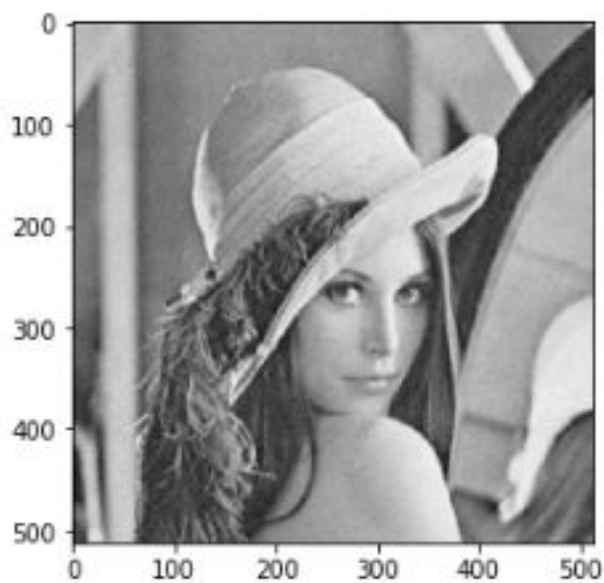
# Computer Vision Homework8 report

R08922143 賴振東

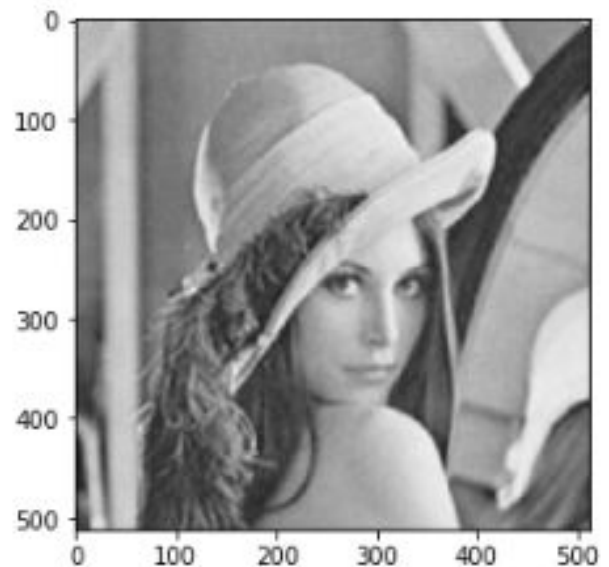
1. Noisy images with gaussian noise(amplitude of 10), and the operations



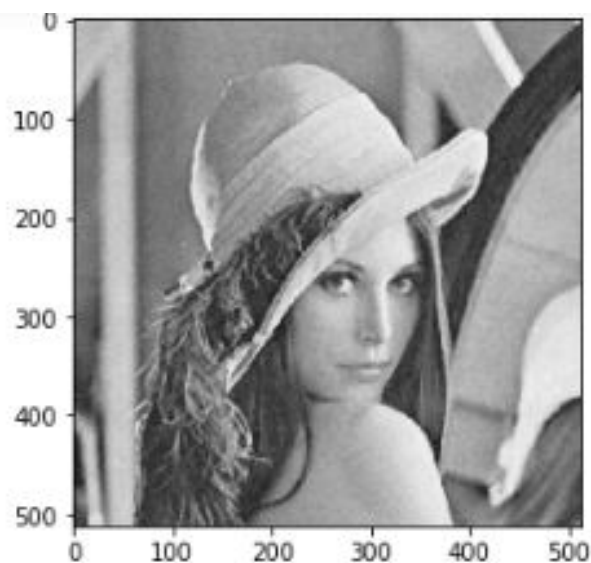
`img_GaussianNoise_10` SNR: 13.595145314237183



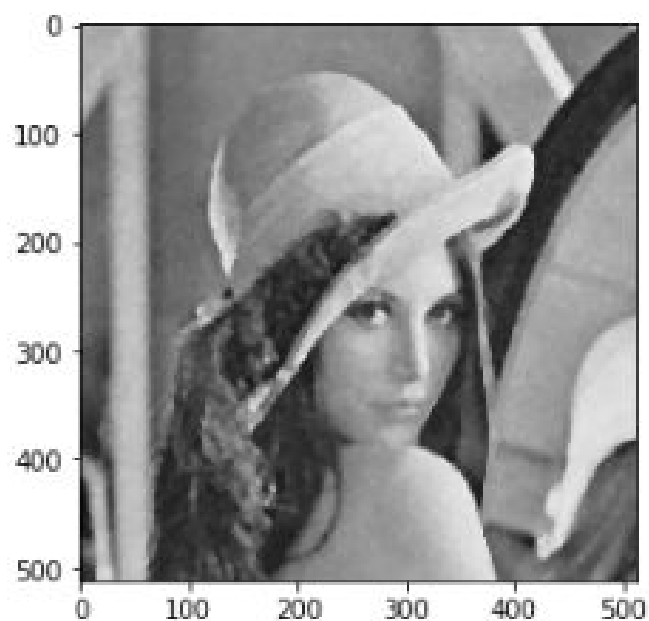
`boxfilter_G10_3x3` SNR: 16.42413419116246



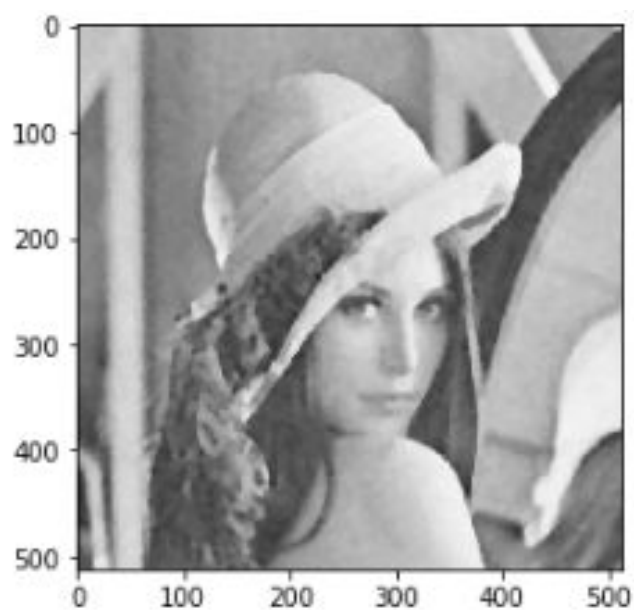
`boxfilter_G10_5x5` SNR: 13.616601471512



median\_filter\_G10\_3x3 SNR: 17.5689174651median\_filter\_G10\_5x5 SNR: 15.8377600754.

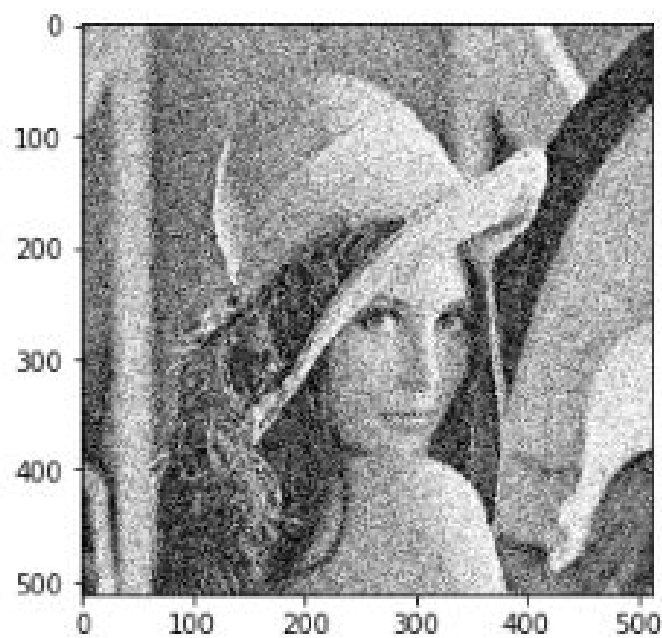


oc\_G10 SNR: 13.28225635092425

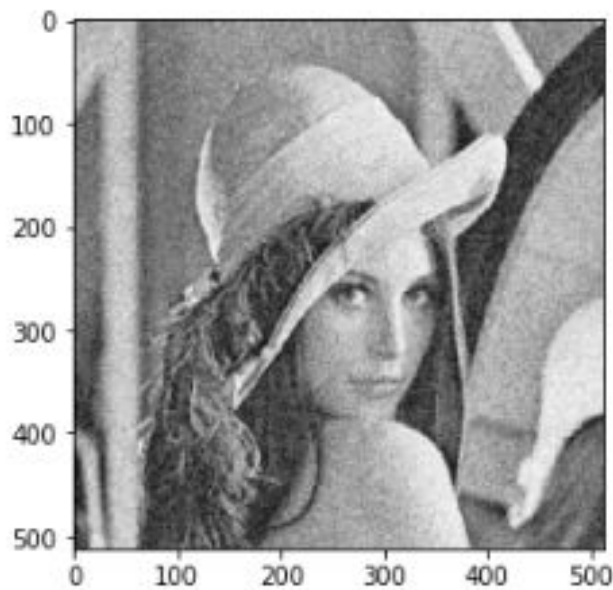


co\_G10 SNR: 13.60808018106204

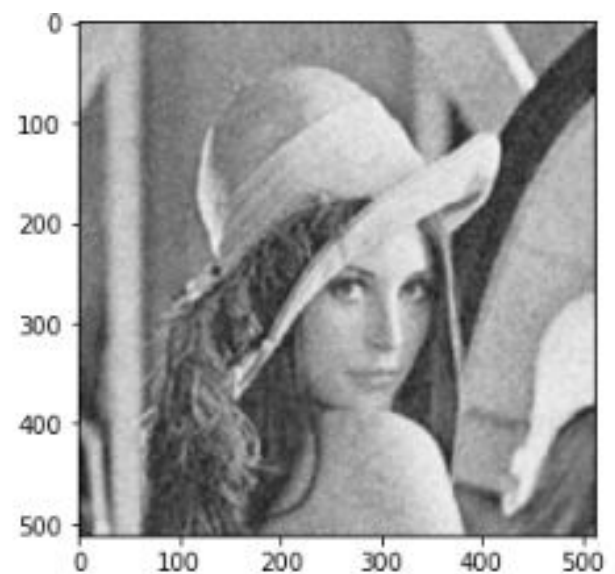
2. Noisy images with gaussian noise (amplitude of 30), and the operations



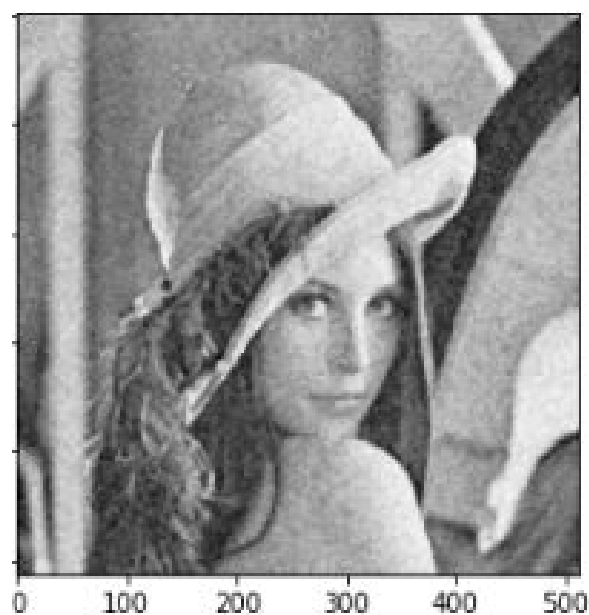
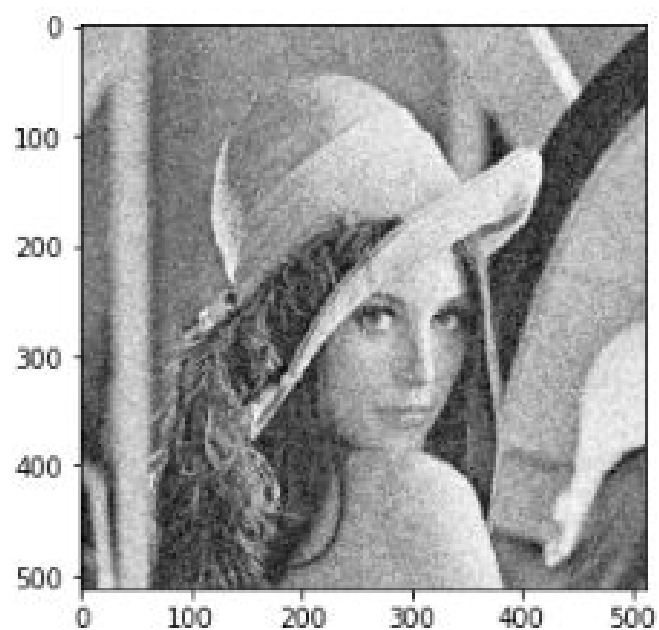
img\_GaussianNoise\_30 SNR: 4.1668157962



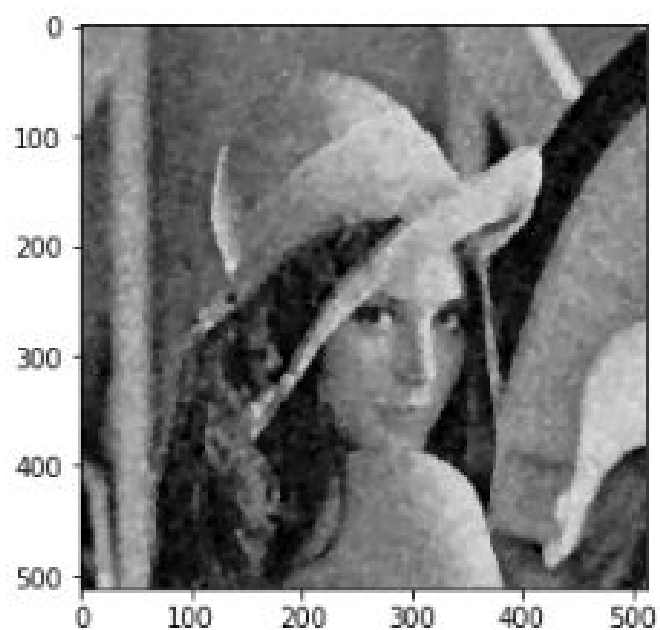
boxfilter\_G30\_3x3 SNR: 12.1508510322



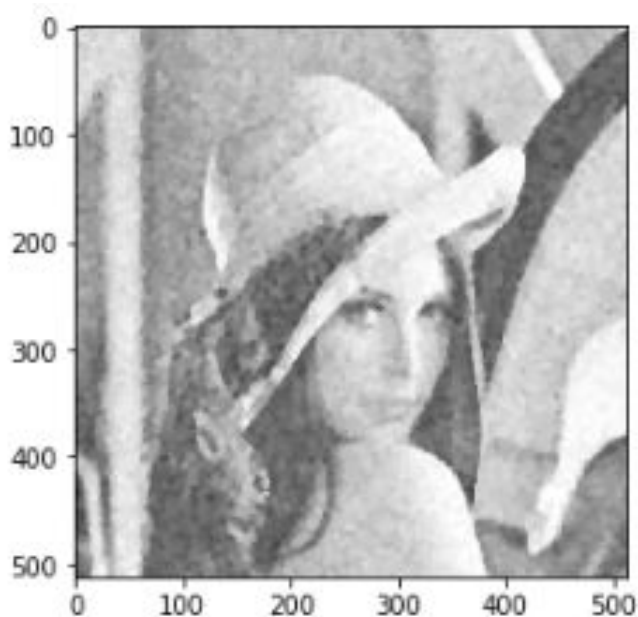
boxfilter\_G30\_5x5 SNR: 12.3895726636



median\_filter\_G30\_3x3 SNR: 10.9811597345.an\_filter\_G30\_5x5 SNR: 12.565534



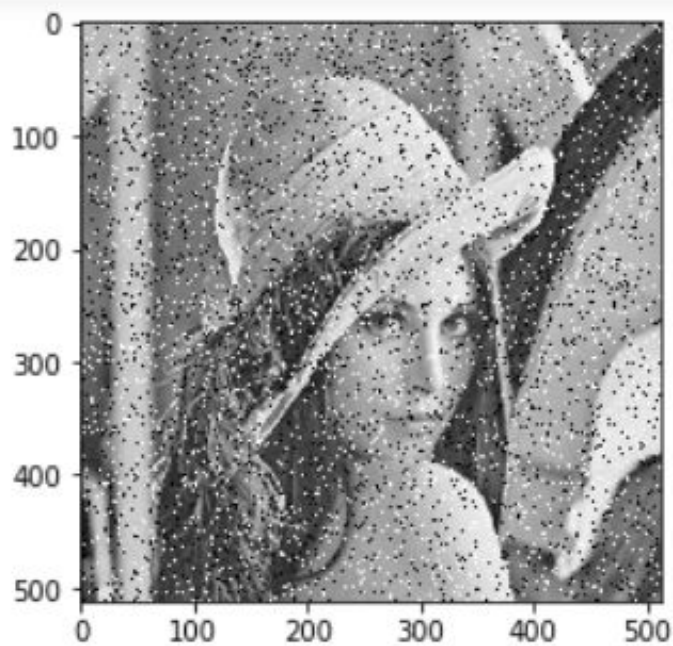
oc\_G30 SNR: 11.120031124021121



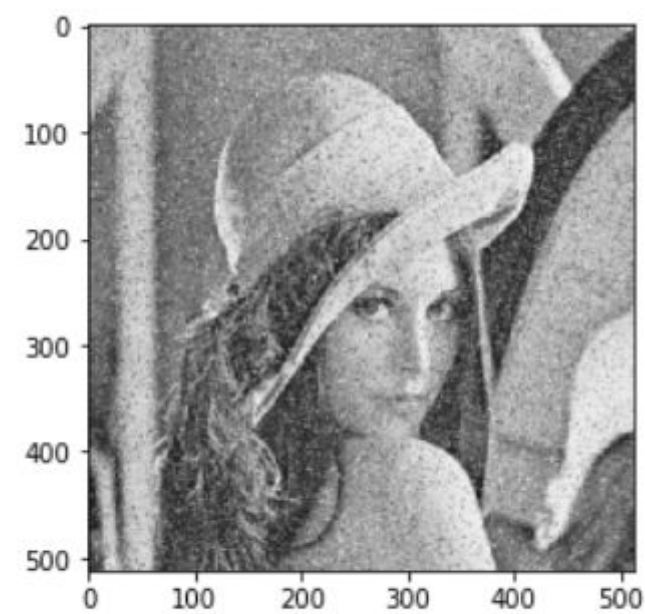
co\_G30 SNR: 11.134047955565771



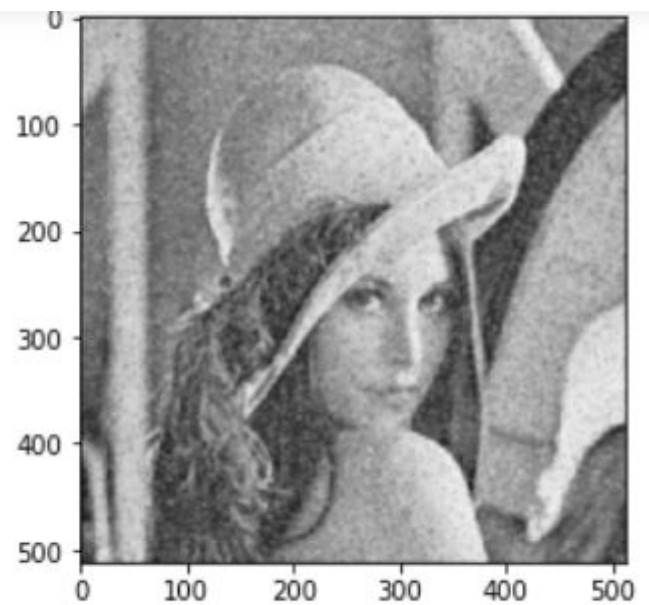
### 3. Salt-and-pepper noise, probability=0.05, and the operations



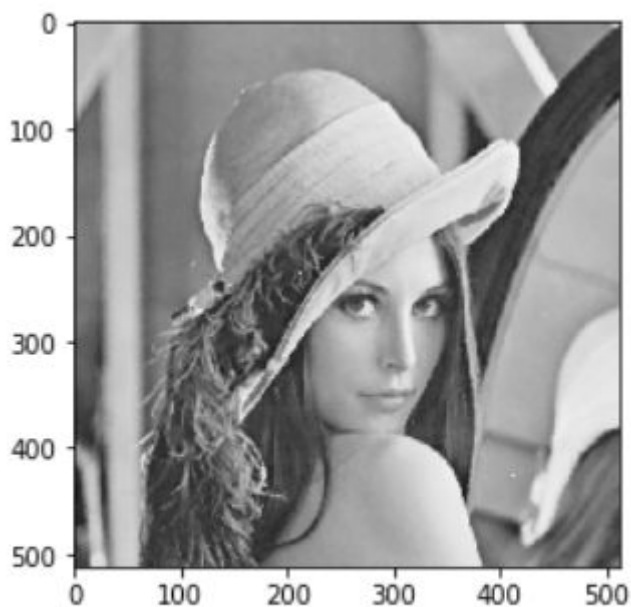
img\_SaltAndPepper\_005 SNR: 0.960553723260913



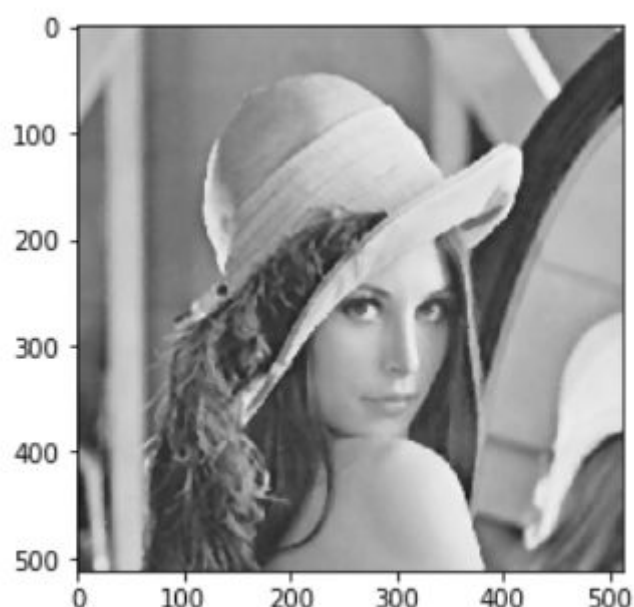
boxfilter\_SAP005\_3x3 SNR: 9.2707610!



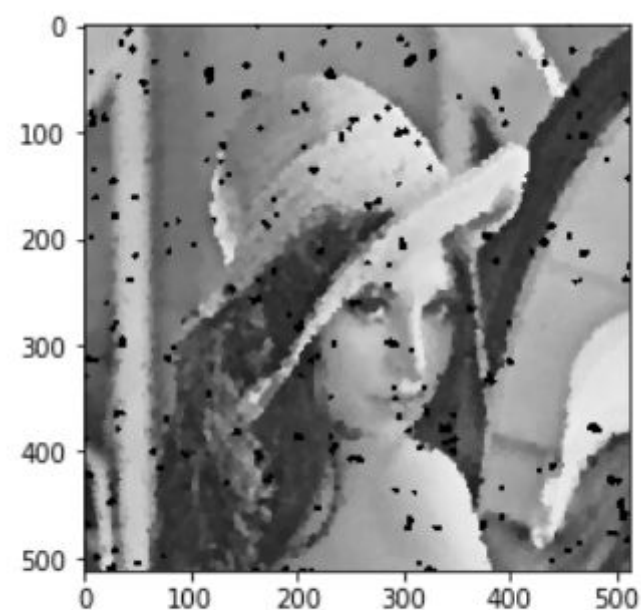
boxfilter\_SAP005\_5x5 SNR: 10.58522997



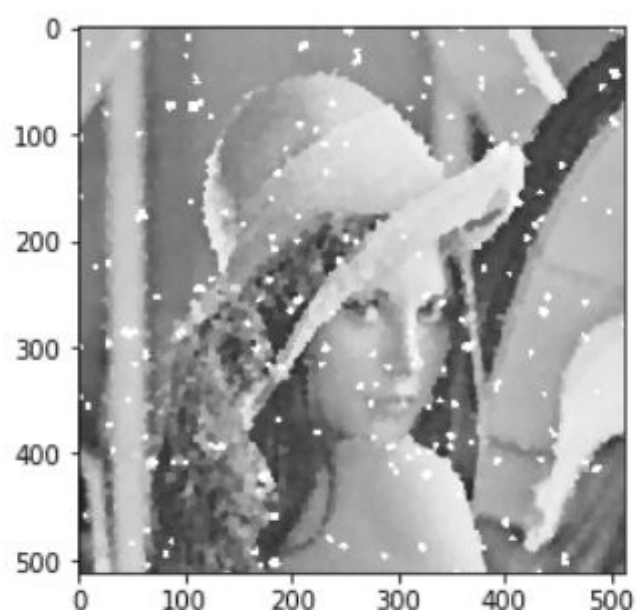
median\_filter\_SAP005\_3x3 SNR: 18.391



median\_filter\_SAP005\_5x5 SNR: 15.844

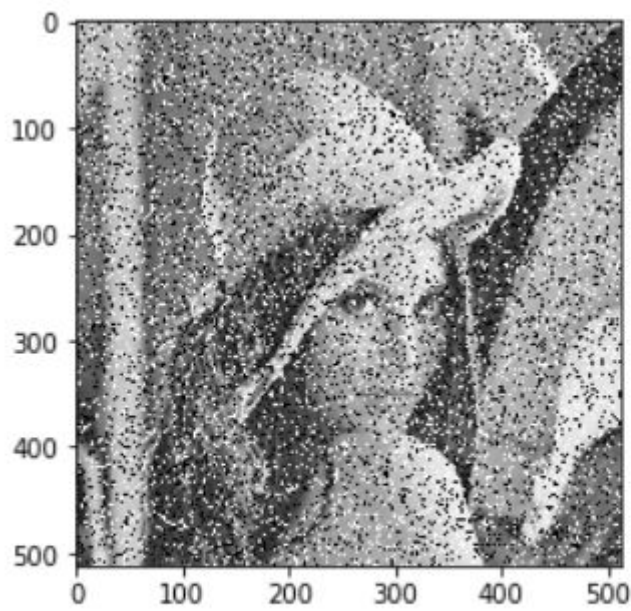


oc\_SAP005 SNR: 5.632387268088957

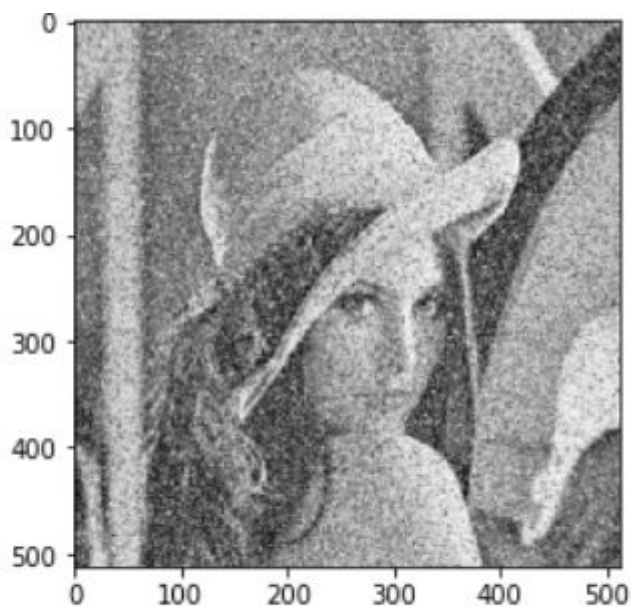


co\_SAP005 SNR: 5.2533349222179755

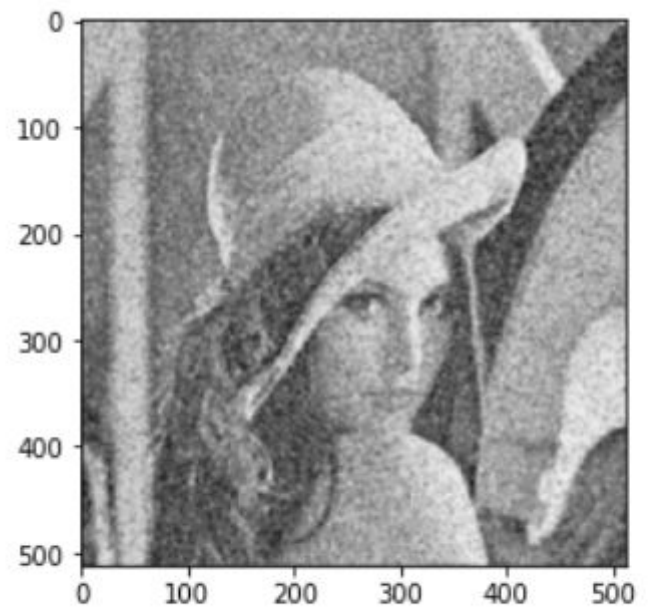
4. Salt-and-pepper noise, probability=0.1, and the operations



img\_SaltAndPepper\_01 SNR: -2.1134794115489886

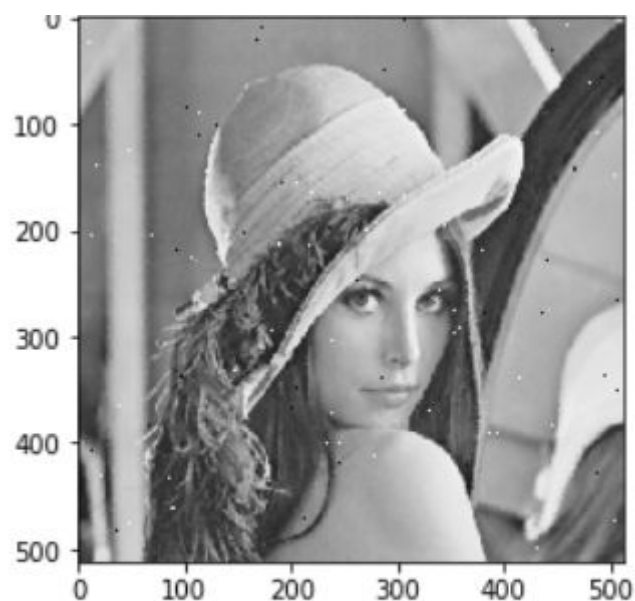


boxfilter\_SAP01\_3x3 SNR: 6.197246757663

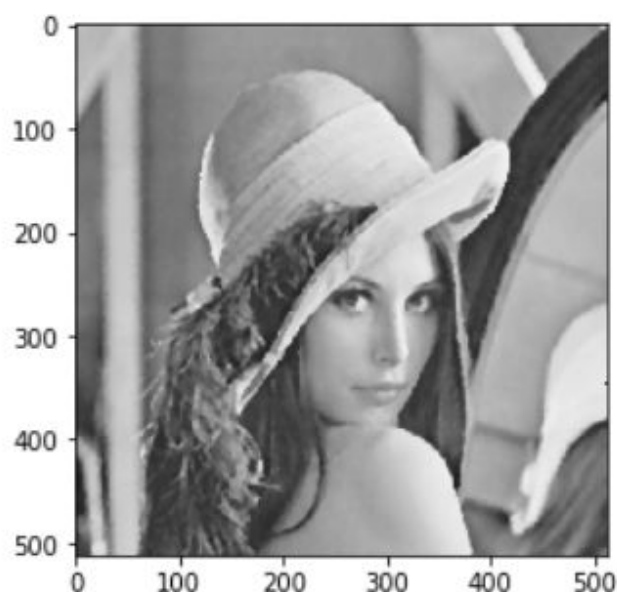


boxfilter\_SAP01\_5x5 SNR: 8.1493492

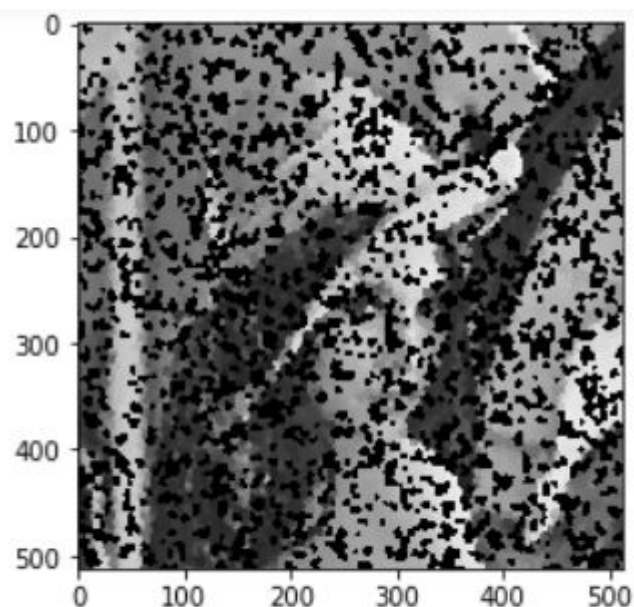




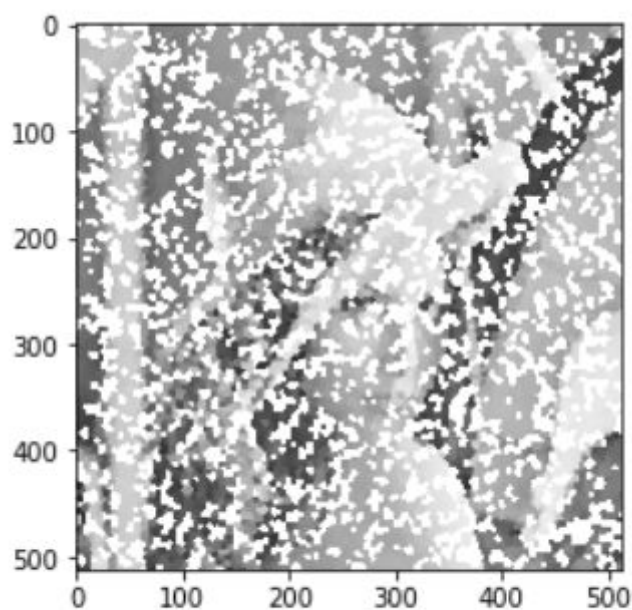
median\_filter\_SAP01\_3x3 SNR: 14.11578



median\_filter\_SAP01\_5x5 SNR: 14.241946



oc\_SAP01 SNR: -2.0318200503358743



co\_SAP01 SNR: -2.533524998007206

p.s oc means opening then closing, co means closing then opening