%to implement various smoothing spatial filters

clc;

clear;

x=imread('rice.png');

f1=[1 1 1;1 1 1;1 1 1];

f2=[1 0 -1;1 0 -1;1 0 -1];

f3=[1 1 1;0 0 0;-1 -1 -1];

x1=x(1:256,1:256);

y1=conv2(x1,f1);

y2=conv2(x1,f2);

y3=conv2(x1,f3);

subplot(2,2,1);imshow(x); title('IMAGE ')

subplot(2,2,2);imshow(uint8((y1))); title('f1- IMAGE ')

subplot(2,2,3);imshow(uint8((y2))); title('f2- IMAGE ')

subplot(2,2,4);imshow(uint8((y3))); title('f3-IMAGE ')