Matlab:

filter2(h,x) : this function filters the data in x with 2 dimensional matrix h.

We obtain y1 by convolution of input and h matrix. So , due to convolution the size of output increases i.e 258*258.
We obtain y2 by filtering input image with the impulse response h(n1,n2). So, the size of the output will be same as input. i.e 256*256.

h(n1,n2) is separable because we can write each row as a multiple of other rows and each column as a multiple of other columns.

The given filter impulse response h(n1,n2) is a low pass filter. We can see that by plotting frequency response of the filter h(n1,n2) using freqz2 function in matlab. We can also say that by observing that it is smoothing the image.

By filtering the input image by h2(n1,n2) , we are able to detect the edges clearly.