Image blur

Write a function called **blur** that blurs the input image. The function is to be called like this:

```
output = blur(img,w);
```

where **img**, the input image is a two-dimensional matrix of grayscale pixel values between 0 and 255. Blurring is to be carried out by averaging the pixel values in the vicinity of every pixel. Specifically, the output pixel value is the mean of the pixels in a square submatrix of size **2w+1** where the given pixel sits in the center. For example, if **w** is 1, then we use a 3x3 matrix, that is, we average all the neighboring pixels of the given pixel and itself. Only use valid pixels when portions of the blurring matrix fall outside the image. For example, the blurred value corresponding to **w = 1** at index (1,1) would be the mean of of elements (1,1), (1, 2), (2,1) and (2, 2). Both input **img** and output **output** are of type **uint8**.

You can download the test image here (https://lcms-files.mathworks.com/content/file/686b475c-bd78-497d-b971-b583832bbf23/vandy.png?versionId=ZUe0hS9J3ZIxKapgDPNMdw_Uvjotsiaf) to use in MATLAB.

Your Function

Save Reset MATLAB Documentation (https://www.mathworks.com/help/)

```
1
```

Code to call your function

Reset

```
1 img = imread('vandy.png');
2 output = blur(img,2);
3 imshow(output);
```

Run Function

Assessment:

Submit

Simple test

Using image file