Assignment 3

Sung Soo Hwang

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- Read an image “moon.png” as gray scale image
  - Perform sharpening on the right-half of the image
    - Perform sharpening using unsharp masking

- Read an image “saltnpepper.png” as gray scale image
  - Perform median filtering on left-half of the the image
    - Set aperture size as 9
    - medianBlur(in, out, val);
      - Blurs an image using the median filter
      - in: src, out: dst, val: aperture size(must be odd and greater than 1)

Assignment 3

- Display 4 windows
  - The name of window should be
    - “moon”
    - “moon_filtered”
    - “saltnpepper”
    - “saltnpepper_filtered”

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Exercise 3

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Exercise 3

- What would be the value of the pixel in red after applying a spatial filtering with the given kernel?

5	5	5	5	5	5
10	10	10	10	10	10
15	15	15	15	15	15
20	20	20	35	20	20
25	25	25	25	25	25
30	30	30	30	30	30

0	1/3	0
0	1/3	0
0	1/3	0

Exercise 3

- What would be the value of the pixel in red after applying a median filtering with the mask size of 3X3?

1	2	3	4	5	6
12	11	15	16	17	7
13	14	10	9	8	18
24	23	22	21	20	19
25	25	25	25	25	25
30	30	30	30	30	30

Exercise 3

- What would be the value of a matrix as a result of applying absdiff() on matrix A and matrix B?

A

1	2	3	4
12	11	15	16
13	14	10	9
24	23	22	21

B

21	22	23	24
16	15	11	12
13	14	10	9
4	3	2	1

Exercise 3

- What would be the elements of ‘rect_roi’ when a ROI of the input matrix is given as follows?

```
Rect rect(2,1,3,4);
Mat rect_roi = image(rect);
```

5	5	5	5	5	5
10	10	10	10	10	10
15	15	15	15	15	15
20	20	20	35	20	20
25	25	25	25	25	25
30	30	30	30	30	30