Image Understanding and Processing

Tutorial 01

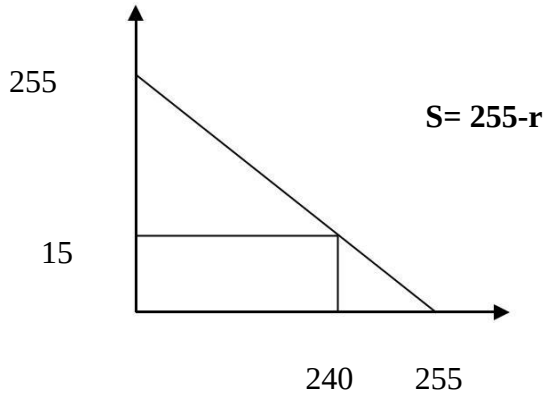
Year 4 Semester 1, 2025

How we get a Negative image?

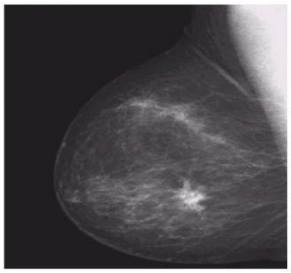
If we replace each pixel value using the function, **s=255-r** we will get a negative image.

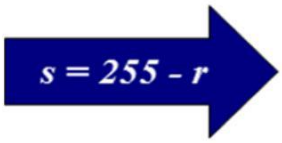
For example: s=255-240

s=15

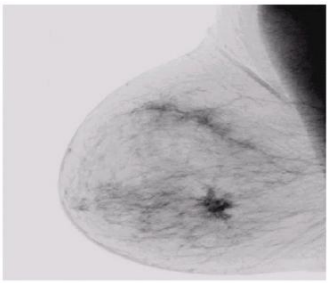


Original Image





Negative Image



Exercise:

Create a multi-dimensional array to represent pixel values as bellow and convert the values to negative.

255	140	45	68	90
255	140	45	68	90
255	140	45	68	90
255	140	45	68	90
255	140	45	68	90

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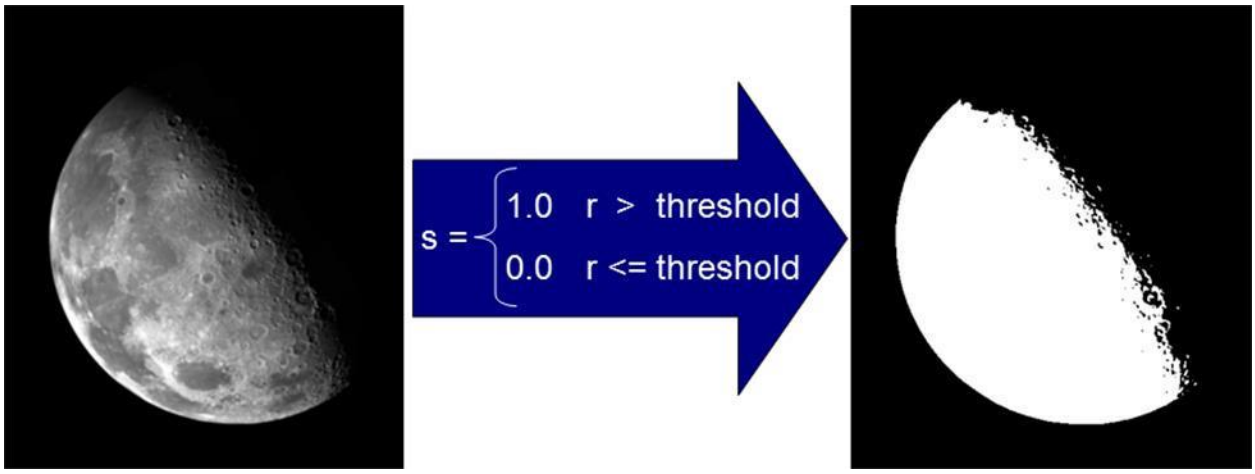
How we get a Threshold image?

Threshold is used to separate an object from its background. Any pixel value less than the threshold value is converted to zero (black). Any pixel value greater than the threshold value is converted to 255(white).



Exercise:

Take threshold value as t=70 and convert the above pixel values as appropriate.