PADP LAB
Color to black Image

Dr. Minal Moharir

Change a Color Image to Black and White

- A black and white image is the one that the intensity values are the same for all color channels, red, green, and blue, at each pixel.
- To change a color image to grey, assign a new intensity,

```
void BlackNWhite(unsigned char R[WIDTH][HEIGHT], unsigned char G[WIDTH][HEIGHT],unsigned char B[WIDTH][HEIGHT])
{
    int tmp;//should i assign this to anything?
    for (int y = 0; y < HEIGHT; y++)
        for (int x = 0; x < WIDTH; x++)
        {
            tmp = (R[x][y] + G[x][y] + B[x][y])/ 3;
            R[x][y] = G[x][y] = B[x][y] = tmp;

           /* R[x][y] = (R[i][j]+G[i][j]+B[i][j])/3;
            G[x][y] = (R[i][j]+G[i][j]+B[i][j])/3;
            B[x][y] = (R[i][j]+G[i][j]+B[i][j])/3;*/
        }
}
```

Gd Functions

- gdImageCreateFromPng():gdImageCreateFromPng is called to load images from PNG format files.
- gdImageSX(): get x-coordinate of input image
- gdImageSY(): get y-coordinate of input image
- gdImageGetPixel(img,x,y): Gets a pixel color as stored in the image.

Gd Functions

- gdImageRed(img,color):Gets the red component value of a given color.
- gdImageGreen(img,color): Gets the green component value of a given color.
- gdImageBlue(img,color): Gets the blue component value of a given color.

Gd Functions

- gdImageColorAllocate(img,red,0,0):Allocates a color.
- gdImageSetPixel(img,x,y,color): sets a pixel color as stored in the image.

Procedure to Install

- sudo apt-get update
- sudo apt-get install libgd2-xpm-dev
- Compile: gcc myimage.c –fopenmp in.png out.png -lgd