

1155141320

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For the bonus assignment, I added the feature that would copy a quarter of an txt file, and create a bmp file that is formed by either an inverse, reflection or combination of both of the quarter copied from the txt file. Each quarter is colored with either a greyscale, red, green, blue colors only, and is implanted with `final.setColor(q-1, n, a, b, c,)` with two out the a,b,c being 0 to create a red, green or blue filter. `Color[q][n]` represent the x, y coordinates of the color density of the original image. To ensure the same quarter is used and create an inverse or reflection effect, after reaching the midpoint(if statement) of the total width/height, the color is implanted at a reverse order. The feature inspire by professor that mentioned how people used to encode their tv by changing the display upside down, greyscale, color filter etc, motivating people to buy a decoder.

```
for(int n=0;n<hight;n++){
    for(int q=0;q<width;q++){
        if(q<width/2&& n<hight/2){
            final.setColor(q, n, color[q][n], color[q][n], color[q][n]);
        }else if(q>=width/2&& n<hight/2){
            final.setColor(q, n, color[width-q][n],0, 0);
        } else if(q<width/2&& n>=hight/2){
            final.setColor(q, n, 0, color[q][hight-n], 0);
        } else if(q>=width/2&& n>=hight/2){
            final.setColor(q, n, 0, 0, color[width-q][hight-n]);
        }
    }
}
```

**Result**

