





Given:

Pixel color value: $RGB(r, g, b)$
where $0 \leq r, g, b \leq 255$

Mapping:

```
if    ( $r - 50 < r' < r + 50$ )  
and   ( $g - 50 < g' < g + 50$ )  
and   ( $b - 50 < b' < b + 50$ )  
then  $RGB \rightarrow (255, 255, 255)$  white  
else  $RGB \rightarrow (0, 0, 0)$  black
```