# Decision:

1. Value out of range: I clipped the value. Say the value is with 0-100, I set any value larger than 100 to 100.
2. Non-integer to integer. In the program, a number with fraction is represented as Double. To convert from an non-integer to integer( for example, R value in RGB is an integer, but the R I calculated from Luv is not an integer), I cast it to int by using (int).

# Results:

1. First program:
   1. The color in Luv changes gradually
   2. The color in xyY changes more rapidly and seems to appear in different area
2. Second program:
   1. When the window is large, it looks similar to the original one
   2. When the window is small, it looks brighter than the original one.
   3. Picture looks a little better
3. Third program：
   1. Some color seems to pop out. Dark area becomes darker, bright area becomes brighter
   2. Picture looks bad
4. Fourth program:
   1. When the window is large, it looks similar to the original one
   2. When the window is small, it looks brighter than the original one.
   3. Picture looks good

# Source code:

see files under each folder in the \*.zip