Color Scheme

MCIT 591 Project

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With summer coming soon, now is the time to think about parties.
Which itself, can be overwhelming. And we are here to help.

Event planning sometimes is all about choosing the right color. Before we choose the decor, food and dress code, we have to make a decision: which colors best represent this event and speak for the host?

Hotpink 4

Peachpuff 2

Sepia

Sienna 3

Lightcyan 3

Gray 20 | Lightsalmon 4 | Bisque 3 | Sgi Lightgray | Bisque 4

Thistle 4 | Gray 20 | Burlywood 3 | Sepia | Burlywood 4

Burlywood | Tomato 2 | Seashell 2 | Lightsalmon 3 | Sepia

Simple is powerful. Why not just start with one picture? And save all the troubles as it can help you to find out the missing puzzles! In this project, we empower our user with the ability to focus by extracting the top N colors (N is decided by user) and help our user to explore by offering a set of similar pictures to inspire sparkling ideas.

Lightcyan 3

Gray 60

Lightslategray

Linen

Gray 35

Gray 65

Lightcyan 3
Gray 10
Ivoryblack
Gray 35
Dimgray 1
Gray 60

Bisque 3
Gray 70
Navajowhite 4
Silver
Sepia
Lavenderblush 3

Mistyrose 3
Gray 85
Darkolivegreen
Rosybrown
Brick
Gray 60

You can start with a beautiful succulent garden

Gray 60

Tan 2

Lightyellow 4

Lightskyblue 4

Gray 35

Indianred 4

Sepia

Gray 25

Peachpuff 3

Navajowhite 4

Salmon 4

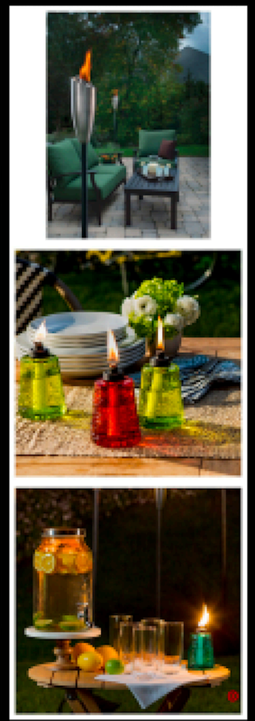
Gray 60

Lightcyan 3

Gray 25

Ivoryblack

Snow 4



Burlywood 3

Slategray 4

Ivoryblack

Gray 30

Gray 15

Gray 10

Ivoryblack

Rosybrown

Sepia

Burlywood 4

Goldenrod 4

Gray 70

Cornsilk 3

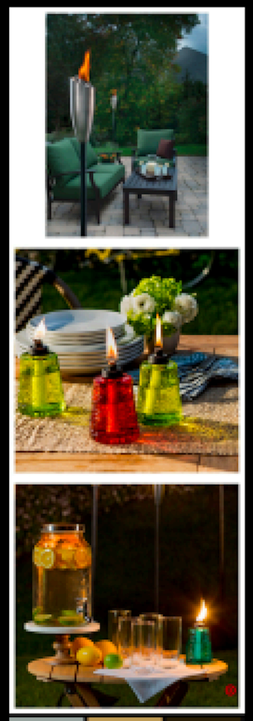
Gray 65

A delicious fruit.

Gray 10

Gray 65

Gray 40



Gray 65

Darkkhaki

Gray 10

Gray 30

Darkolivegreen

Sgl Gray 16

Gray 40

Gray 5

Sgl Gray 16

Your favorite mountain.

Gray 25

Gray 45

Gray 85

Gray 35

Thistle 4

Sgi Lightgray | Gray 90 | Gray 65 | Gray 80 | Thistle 4

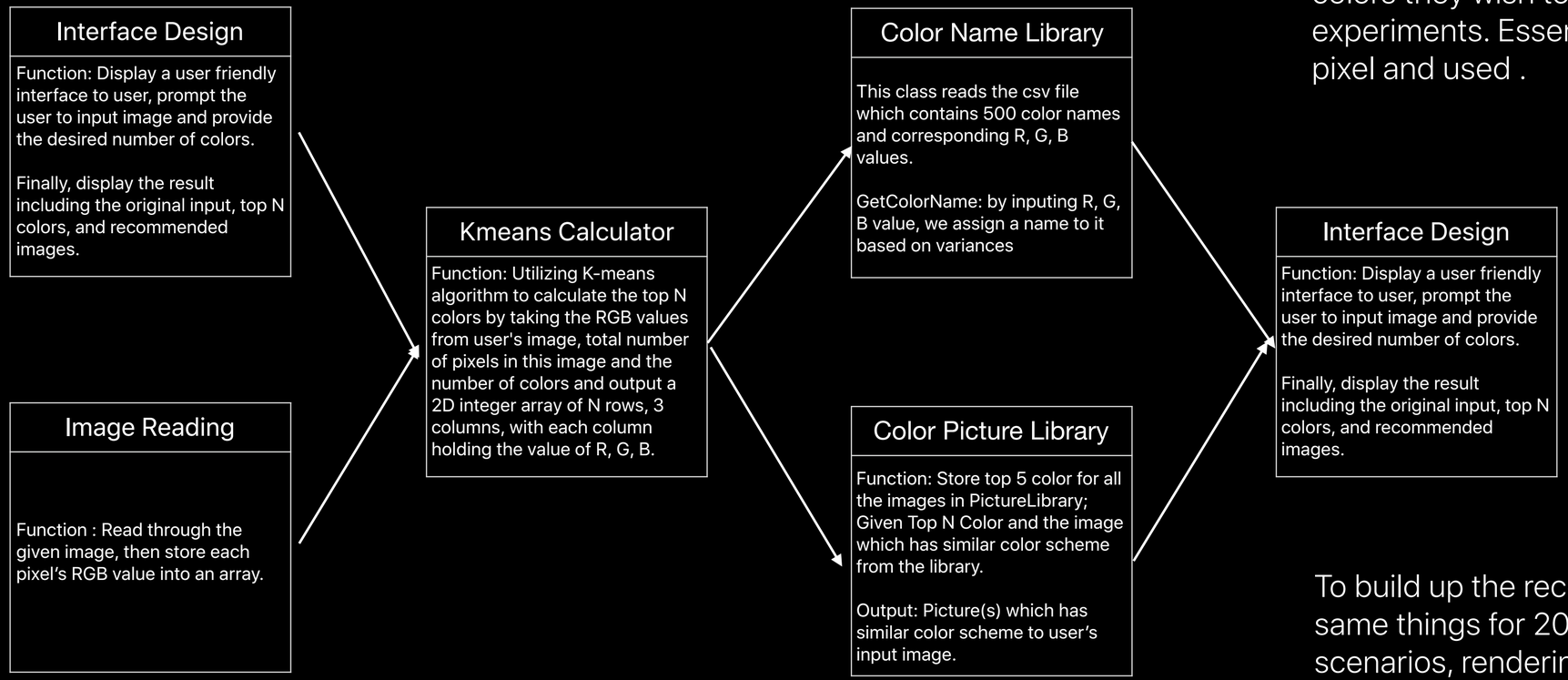
Gray 25 | Bisque 3 | Lightslategray | Ivoryblack | Burlywood 4

Gray 70 | Darkolivegreen | Yellowgreen | Lemonchiffon 4 | Palegoldenrod

Or a lavender bouquet that promotes a serene calm feeling.

Give us anything and we can find an answer for you !

Behind the scene...



So what's happening behind the scene?

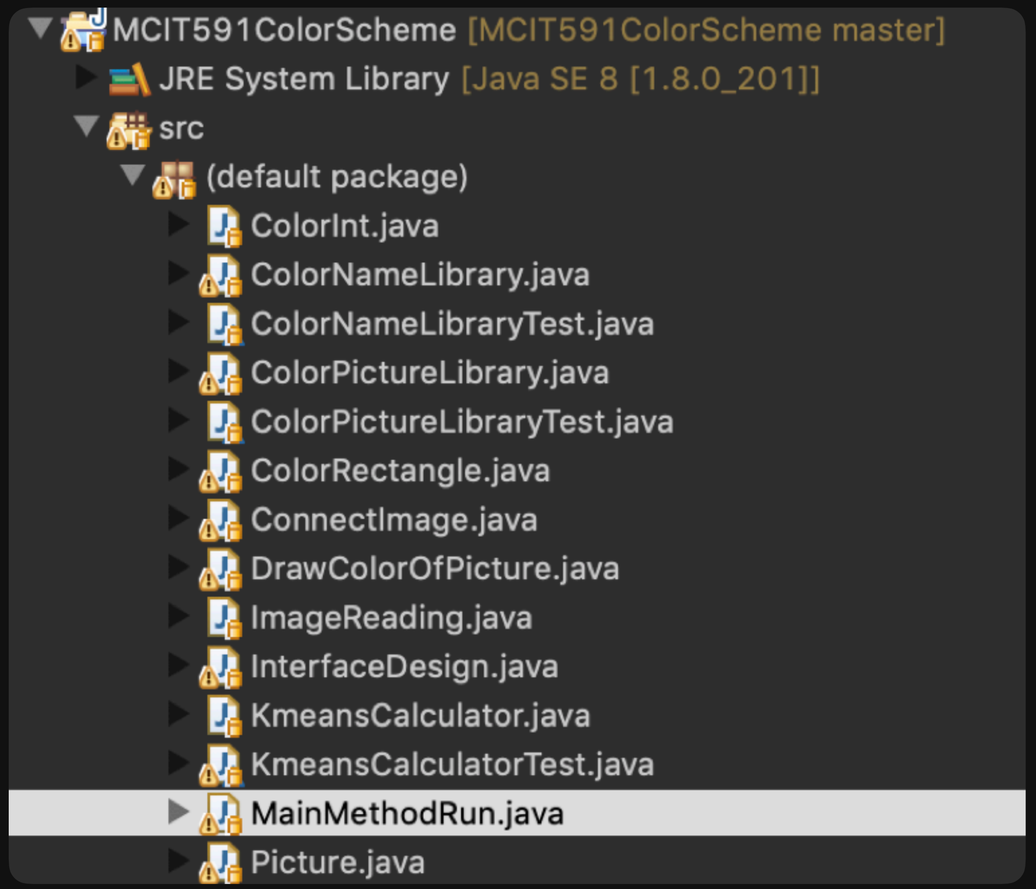
We started this journey by understanding our users and prompt them to input their favorite pictures and number of colors they wish to see. Behind the scene, it's a lot of experiments. Essentially we read the R,G,B value pixel by pixel and used .

While calculating distance in k-means, we introduce a ratio parameter between three channels beyond the pixel distance to achieve better performance. As a results, we have a number of colors best presents this picture.

To build up the recommendation system library, we did the same things for 200 other pictures throughout different scenarios, rendering a vast amount of combination of colors to choose from.

To better match quantized color from user input to our library to make recommendations, we further divide these colors to 500 specific categories. Now the user image and our library speaks the same language. Sorting the library in terms of similarity enables us to realize the recommendation system.

Step 1 - Run the program

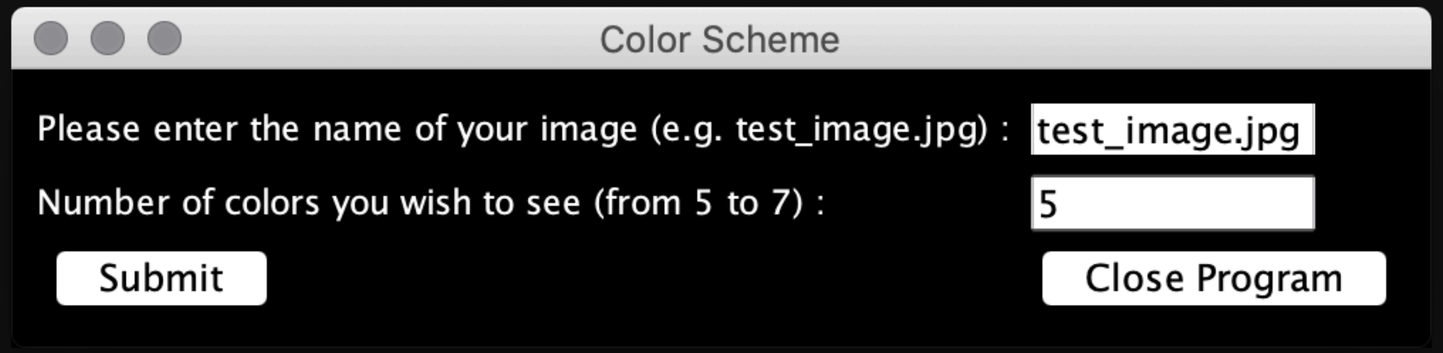


MainMethodRu...

```
12  public class MainMethodRun {
13
14      public static void main(String[] args) {
15
16          InterfaceDesign uInterfaceDesign = new InterfaceDesign();
17
18      }
19  }
```

For the ease of use, we combined all the functions in one file -- MainMethodRun.java.

Step 2 - User Input

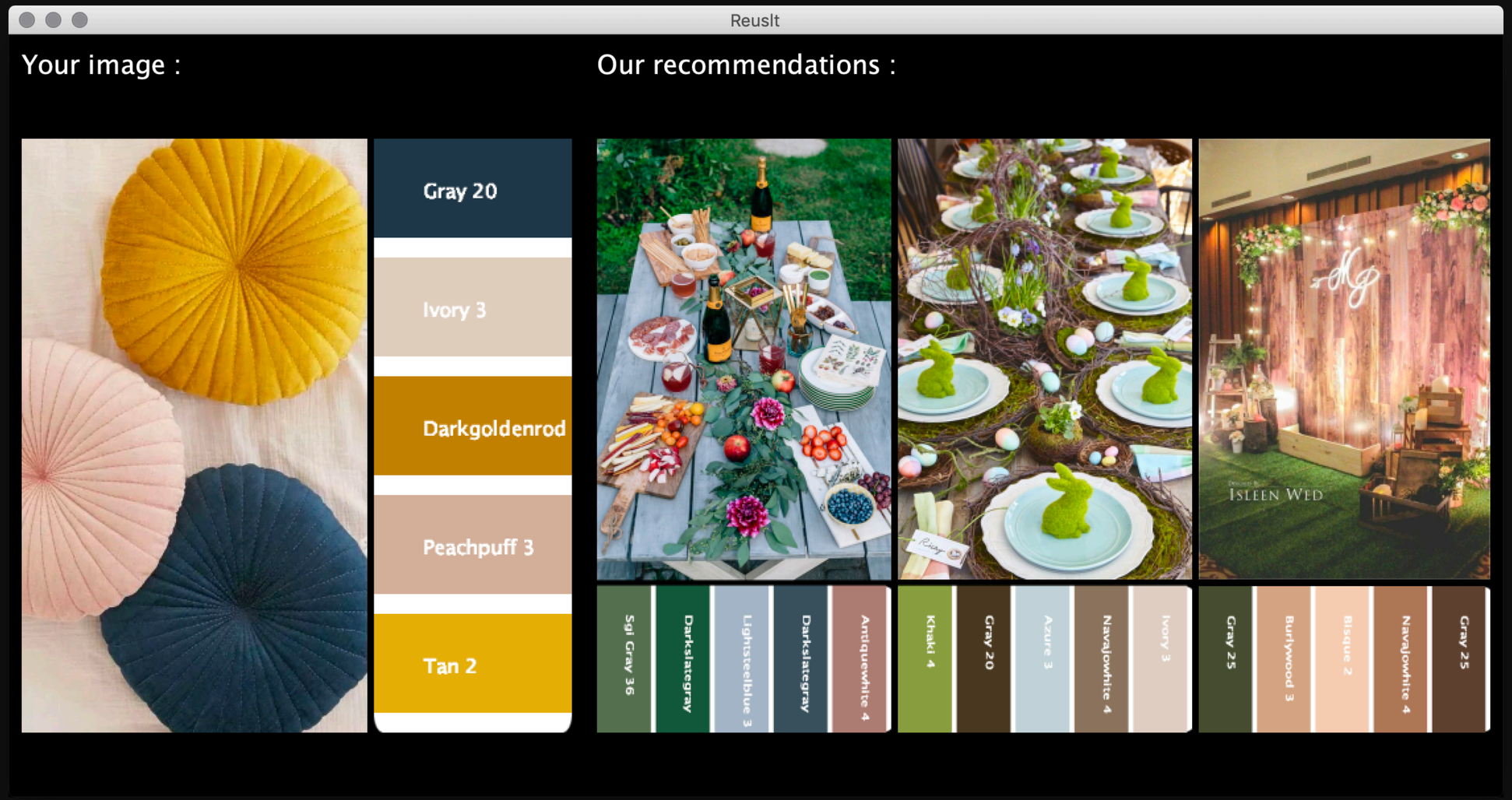


After you hit “run/play button” in MainMethodRun.java, you will be prompted to enter the name of your image and an integer (should be ranged from 5 to 7) which indicates how many colors you want to get in the color scheme.

The format of image name should be “xxx.jpg”, also the image needs to be in the same project folder. There are 11 sample test images in our java folder for your use.

To get the optimized result for the recommended images, we set the range of user input integer to be 5-7.

Step 3 - Result



TA-DA!!

Thank You !

Thank you for watching! Please feel free to contact color scheme team!