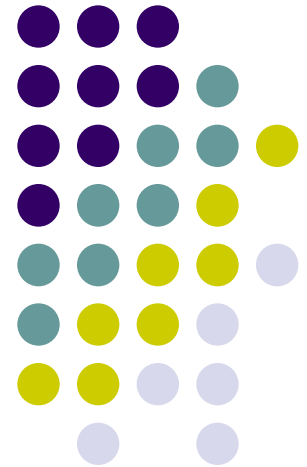


Ubiquitous and Mobile Computing

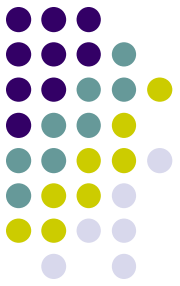
CS 528: *Final Project Report*

Zhaojun Yang
Kuang Xiong
Tengyang Jia

*Computer Science Dept.
Worcester Polytechnic Institute (WPI)*



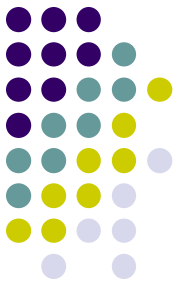
Motivation



A recent study found that the average woman, in the course of her lifetime, spends *almost one year* standing in front of her closet deciding what to wear.

What if there is an app can help people manage their closet...

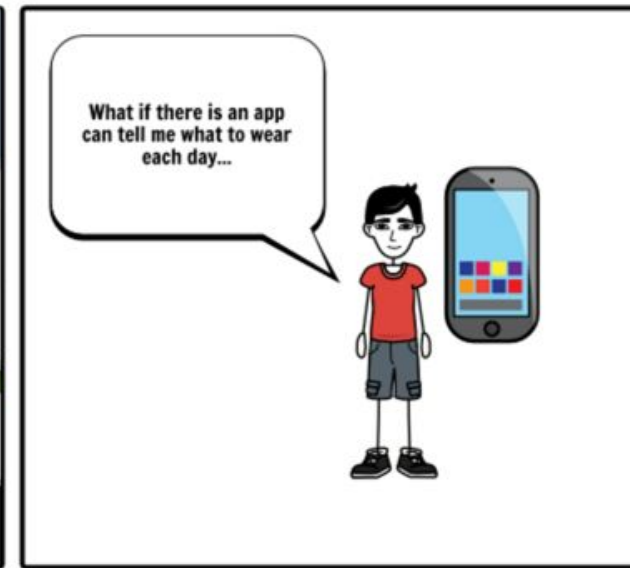
Motivation-Tengyang's story



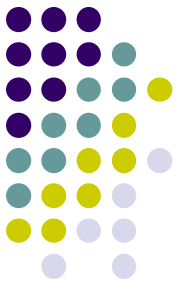
Tengyang gets up and finds himself late. He gets up and puts on the outfits he dressed yesterday.



The temperature dropped down dramatically so he feels cold all day. What's worse, he has to go to an interview wearing short pants.

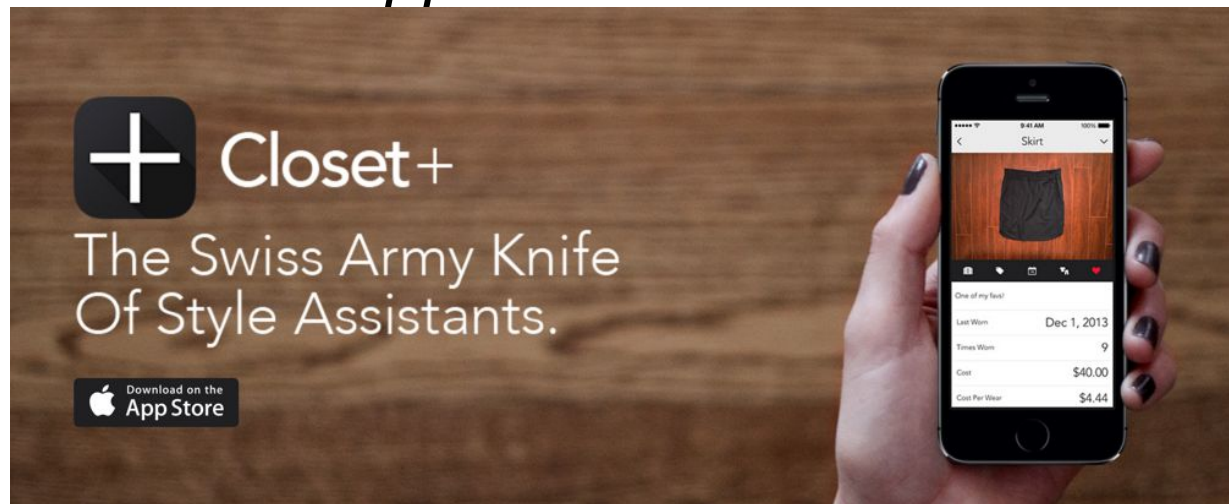


He needs an app than can remind him what to wear every day.



Related Work

- *People's clothing behaviour according to external weather and indoor environment*
- *Book of Colors: Matching Colors, Combining Colors, Color Designing, Color Decorating*
- *App: Closet+ an iOS app*

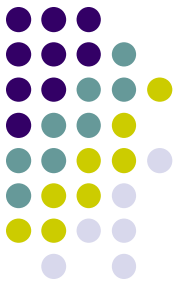


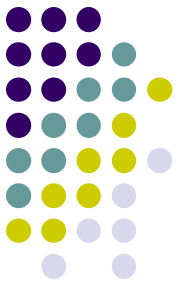
Features Overview

- Weather
 - OpenWeatherMap api
- Schedule
 - Formal / casual
- Virtual Closet
 - Help manage outfits
 - Classification
 - Color, type, style

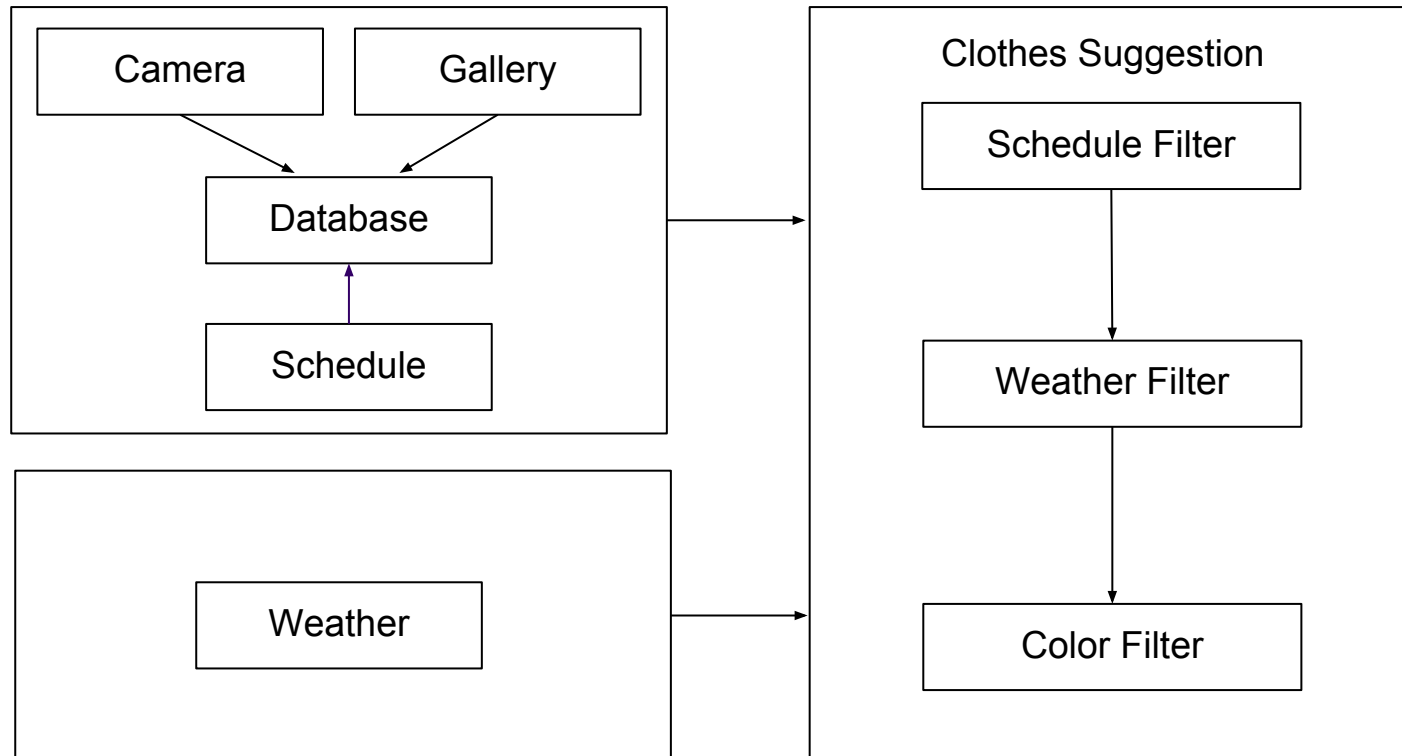


APRIL 2016						
SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7

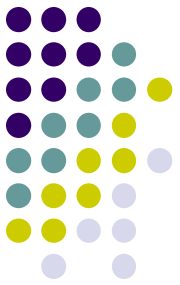




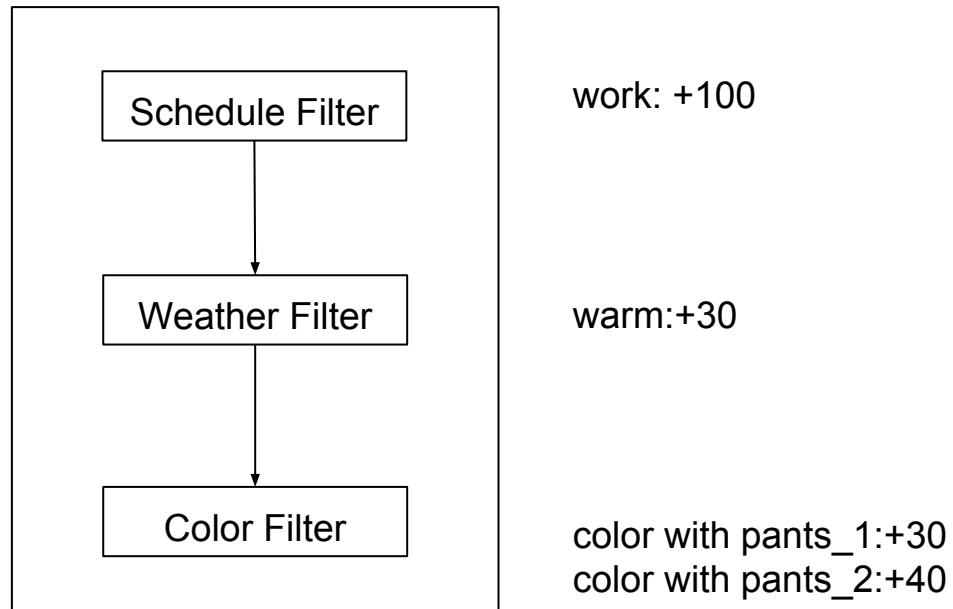
Architecture



Methodology - suggesting algorithm



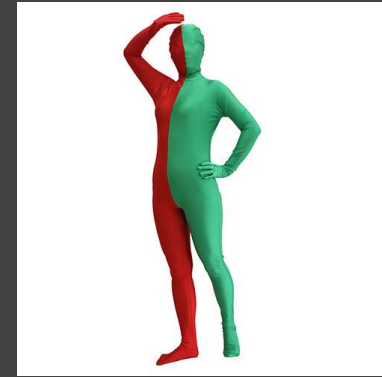
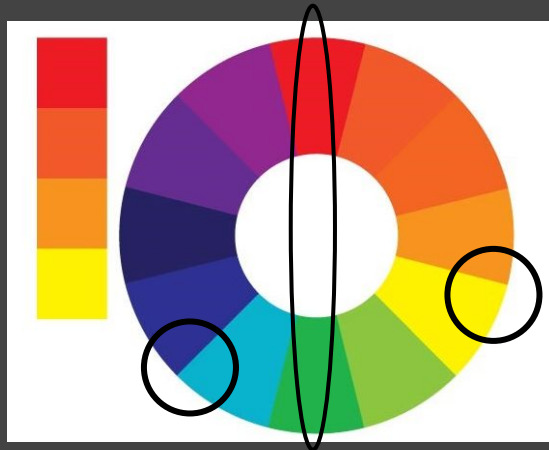
Clothes Manager



Return the clothes matching plan with the highest score.



Methodology - color filter

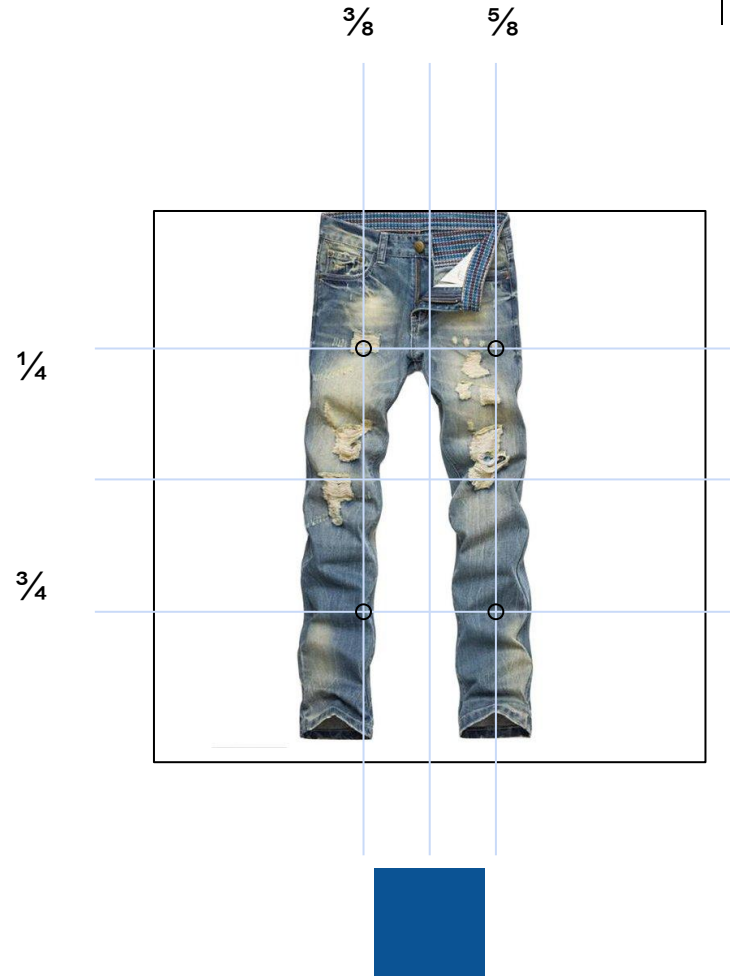
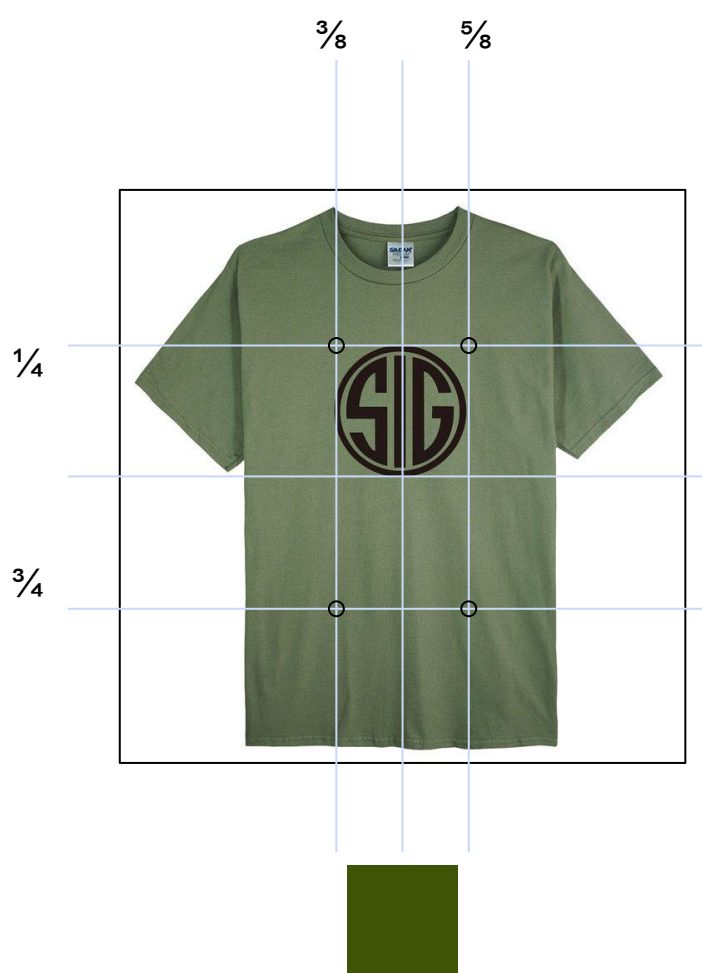
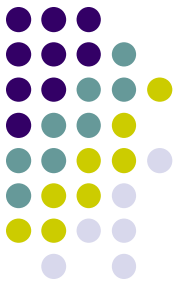


Ugly



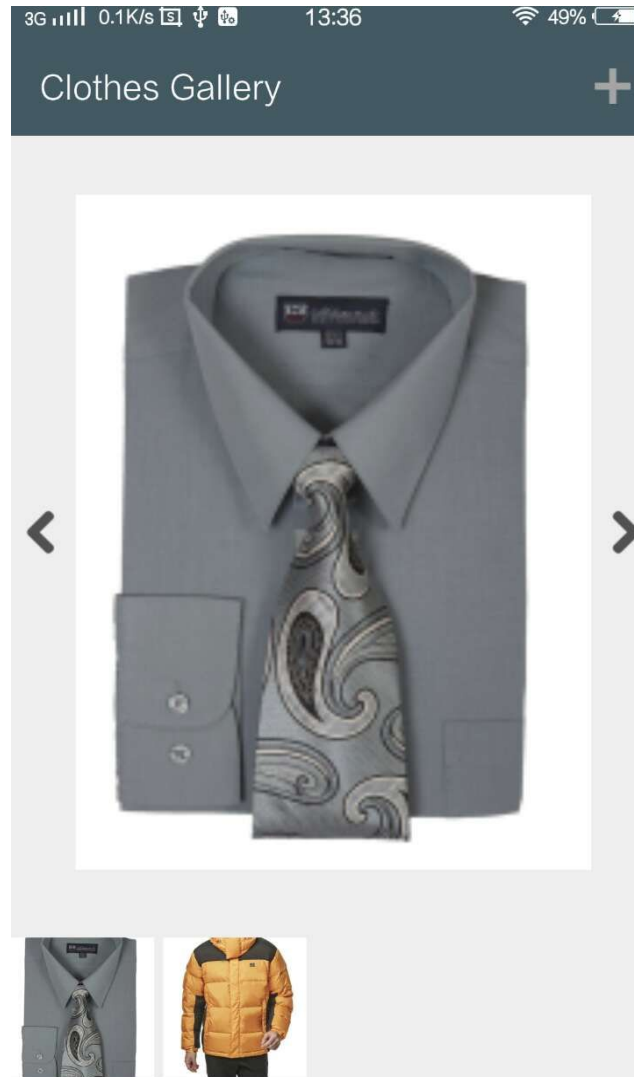
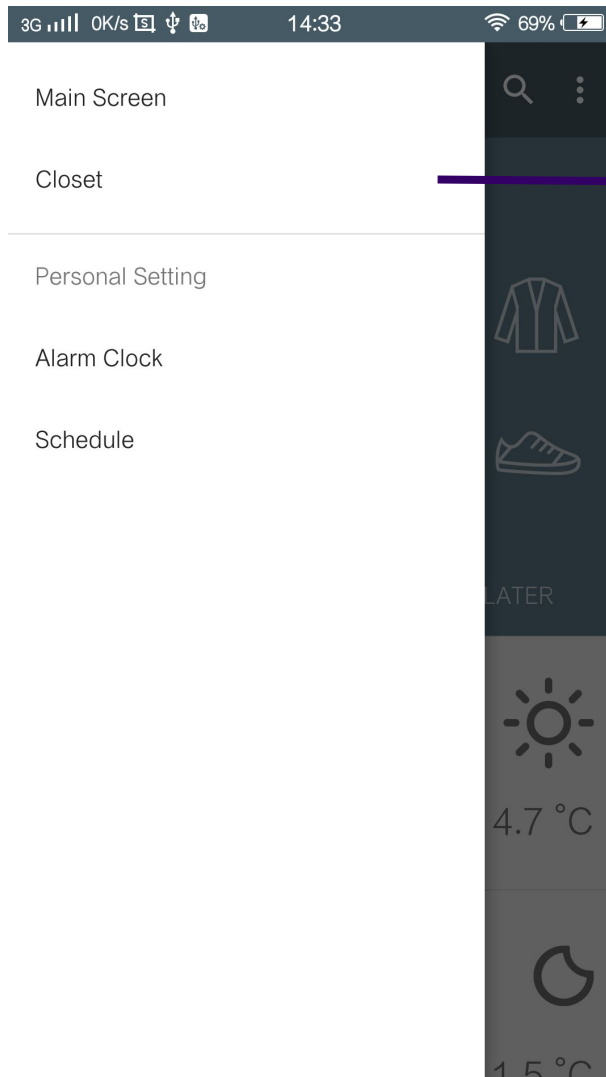
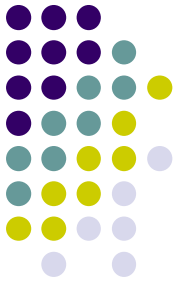
harmonious and beautiful

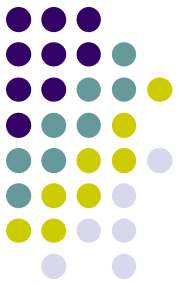
Methodology - color filter



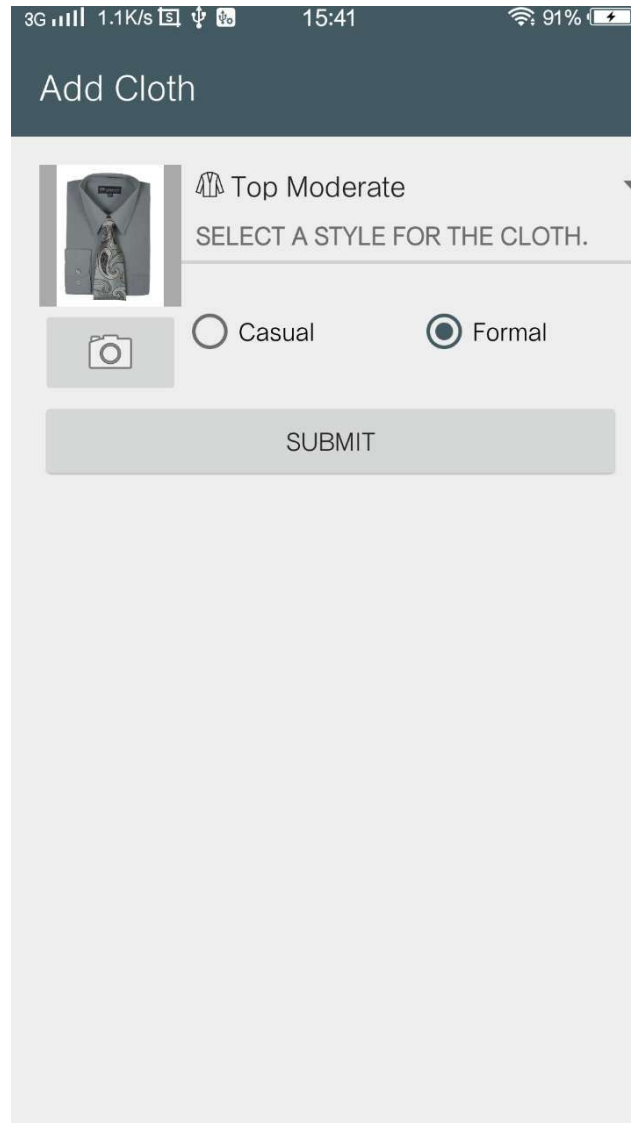
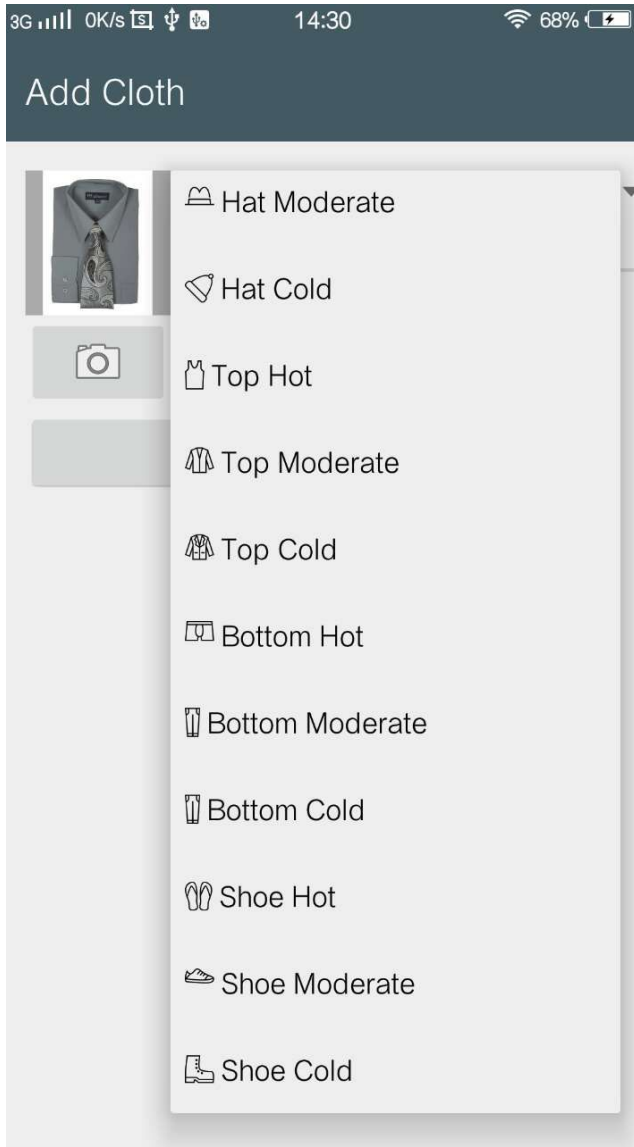
Average colors of four sampling points
and calculate the distance between the colors of different clothes

Implementation

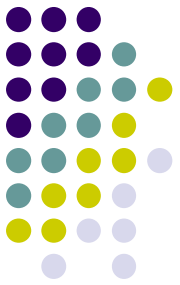




Implementation: Closet



Implementation: Schedule



3G 0K/s 14:32 68%

Style

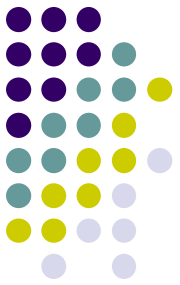
< APRIL 2016 >

SUN	MON	TUE	WED	THU	FRI	SAT
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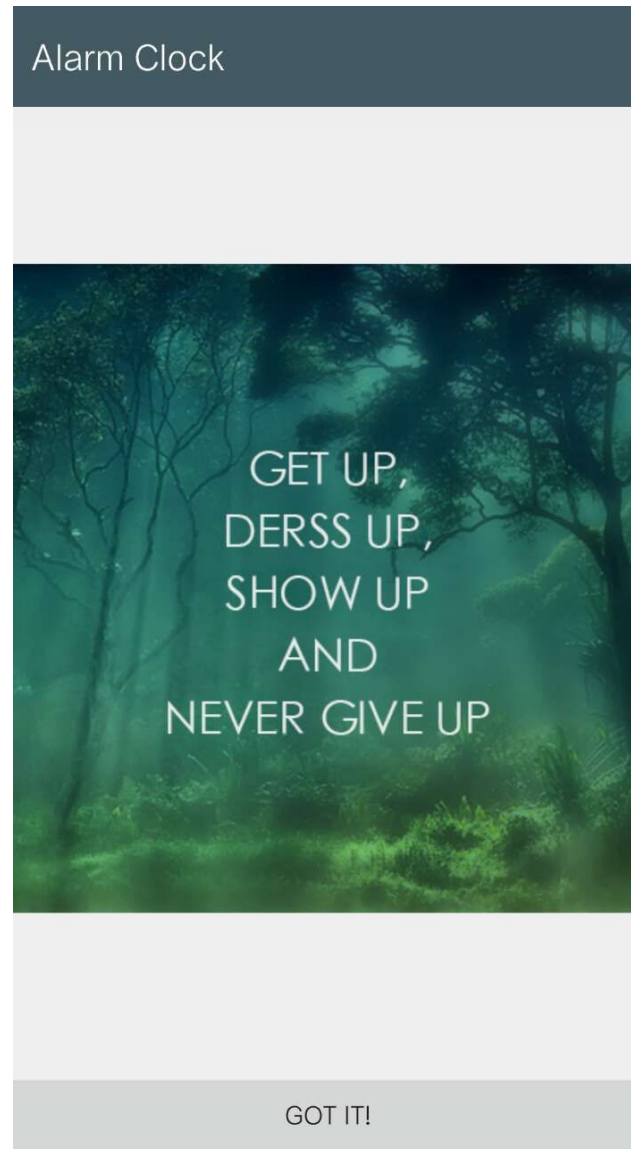
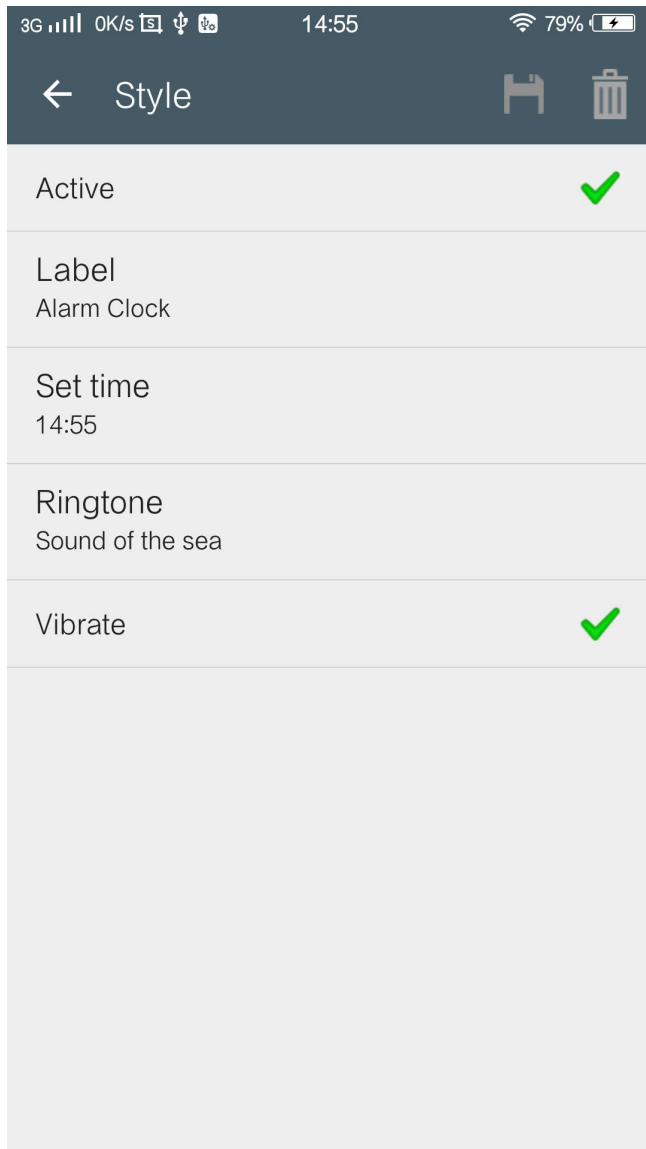
3G 0K/s 13:37 49%

< Style

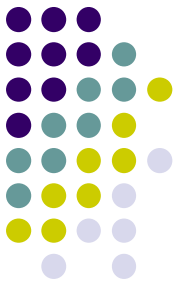
- Wedding
- Funeral
- work
- home



Implementation: Alarm



Implementation: Weather



3G 0K/s 14:27 67%

Worcester, US

14.3 °C
Clear sky

Wind: 6.2 m/s →
Pressure: 1011.0 hPa
Humidity: 30 %

Icons: Hat, Jacket, Pants, Sneakers

TODAY TOMORROW LATER

Wed 27.04.2016 - 17:00

Clear sky

Wind: 3.6 m/s →
Pressure: 993.5 hPa
Humidity: 30 %

14.7 °C

Wed 27.04.2016 - 20:00

Clear sky

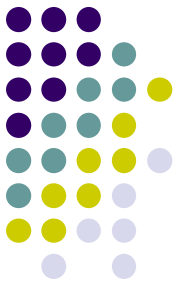
Wind: 3.6 m/s →
Pressure: 992.8 hPa
Humidity: 30 %

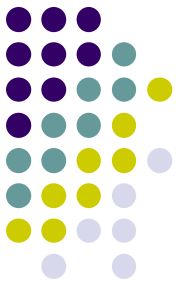
3G 0K/s 14:31 68%

Clothes Gallery

Evaluation

- User study: user satisfaction





Question?