**Ricardo Rigodon**

**Assignment 3 – Open Source Software: Proposal and Specifications**

**Due Date: Tuesday, March 8, 2016**  
  
I chose Option 2 to choose a problem I face in daily life. Choosing clothes that match to wear is very important for looking your best. I’ve always had trouble of putting together clothes or colors that really did not go well together in the past and I got better since then so I wanted to fix it for others. So how about an app that could tell you if the outfit you chose colors all match? The way it would be intended to work is by grabbing the color of the clothing item in the camera and storing that color. It would prompt the user for the pieces of their outfit and then finally tell them if what they chose to wear is a match or not. It is a better option than googling “does red black and orange match” instead you could choose the colors you are wearing via a color wheel and find out really quick. I will plan doing this on the Android platform so it will be a mobile application. This could be used by almost anyone and will let you know if the clothes colors’ you are wearing work together or not.

I plan to use an open source library under the Apache License to implement a color picker that allows a user to select a color value that matches the color of the clothes they are trying to find out matches. I will use a dependency for my project to use this library for the color processing. The color picker allows for a whole range of colors to be selected and there will be a save color that will store the colors the user chooses into an array. The user will be prompted to present a color of the shirt they are wearing, pants, shoes, and accessories if applicable. Then, this will be passed into the matching process that will process the colors and return a Boolean value where true is where the outfit is a match and false where the outfit is not a match. How I will process the colors will consider a whole host of possibilities and whether or not the colors complement one another. Then, the result is sent via a toast to the user to let them know if their outfit is a match or not a match.   
  
The challenges of creating an app like this is the amount of possibilities to consider of matches, particularly fashion that changes so often with what is in and what is out that maybe updates might be in order in the future. Also, what might work for one individual might not work for another.   
  
Three Open Source licenses that I was interested in was Apache License 2.0, MIT License, and GNU General Public License (GPL).  
  
Apache License :  
Pros : If anyone changes your code, they must state so. Also includes patents for author and contributors.  
Cons: Using a library with Apache you must state exactly what you changed.

Similarities : MIT and Apache both permissive. GPL also grants patents.

MIT License:  
Pros: If people use your work they must give credit   
Cons: Allows people to profit off your software / People can do whatever they want to your software

Different from Apache : Must get patents on your own.

GPL :  
Pros: Prevents people from making changes to work without providing changes to you / Disallows profit from software you make if they use your code.   
Cons: If changes are made to make a derivative software it must be released under the GPL as well.

If you use library with GPL license and make changes, you must also release your software under GPL.

Different from Apache and MIT : Copyleft, more requirements on how software is distributed and limits on profit from software.   
  
I will use the Apache license because the library I’m using uses the Apache license and also because I want people to build upon my code and make it better as opposed to making changes but not being allowed to share them.

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