Android Quiz Smartec application by Karim Mohamed Bibars

User Interface

- The application consists of 3 main Screens :
    1. SplashActivity →Shows a splash screen with an ImageView and waits for 3 seconds before launching the MainActivity
    2. MainActivity →Contains an Edittext ,a Button and a RecyclerView
    3. UserActivity→Contains a RecyclerView
- Border.xml→to help create a border around some of the views
- Single_item.xml→Holds the view in which each item inflated inside the RecylerView (ImageView and a TextView)
- Single_item2→An alternative View which I decided not to use in the end
- I used https://romannurik.github.io/AndroidAssetStudio/ to generate my mipmap and drawables for the applicatoin
- I did not see any restrictions on how the UI should look like so I went ahead and made it vertical instead of horizontal , I felt it fit better
- I added a color changer setting button to change the background color of the whole app
- I added the android:configChanges="orientation|screenSize" to help me deal with rotating the screen
- I played with the adjustViewbounds when loading the image but I decided to show them this way so that the user could see the whole   image + the text in one screen

Development points

- The application uses flickr API to retrieve images according to a specified word in the EditText
- I used the **flickr.photos.search** API method to retrieve the images in both activities where I used the &text="" to retrieve photos with this text in the tag or the photo text then &user_id to retrieve more photos from user in the UserActivity , I also set the URL to retrieve 500 entries which is the maximum number of entries allowed since I could not find a way to scroll through the pages and get all the entries available
- I used AsyncHttpClient library to call the URL and received the response as String then created a parsing method to parse the XML and retrieve the data of each entry in the response in an ArrayList of SingleResponse class I created which holds the definition of each entry
- I created a ViewHolder class to hold values for the ImageView and the TextView in the single_item.xml
- I created an Adapter class which fills up the RecyclerView with the data using the ViewHolder Class as references
- I used the Picasso library to help me load the images and the placeholder images into the ImageView

- As for the Caching I used SharedPreferences to store the response string I receive and saved it with a key value of the search tag I used then checked before calling the fetchData method if I have saved it before, I do understand this is not the best way of caching since I am lacking the option to check when did I save this data so if it is a very old set I should load a new one also I applied the caching on the MainActivity only and not the UserActivity since I could not log the time of the caching to control when to use the cache and when to consider the cache old and replace it

Libraries used

http://square.github.io/picasso/

http://loopj.com/android-async-http/