CS5551 - ADVANCED SOFTWARE ENGINEERING

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HOME ASSIGNMENT #3

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TASK:

To develop an Android application with a Registration form with basic information and to accept a Photo from User's Phone camera or Gallery and get the Current location of the user and use the photograph selected by the user as a custom marker on the Map.

STEPS:

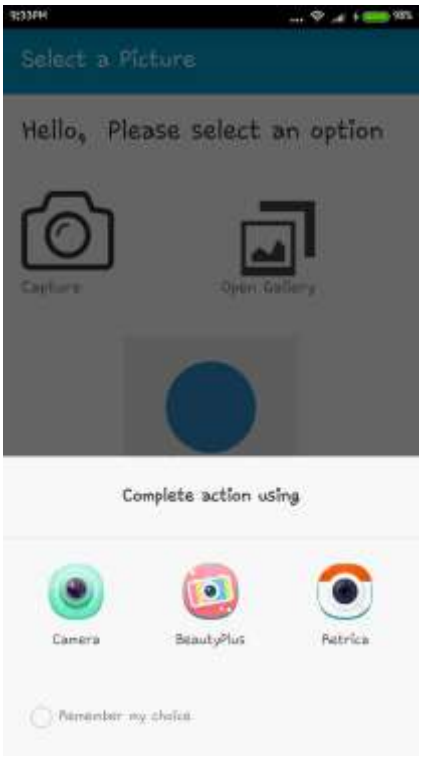
1. A new Android Project has been created with **API 15: Ice Cream Sandwich**.
2. Developer mode on Phone has been enabled on the phone by tapping on the Build number for seven times. Then in Developer options **USB Debugging** has been enabled.
3. A Blank Activity has been created with name: **activity_registration** and basic widgets like TextView, EditText, Buttons have been added.
4. Upon Registration User is redirected for Picture Selection Activity (**activity_select_picture**), where User can either capture a Picture from his/her Mobile phone camera or select an existing image from the phone gallery.
5. Upon selection, the image is displayed using **ImageView** widget. When the user taps on Continue, he/she will be redirected to Maps Activity where his/her current location is fetched, latitude and longitude are reverse geo coded and the image selected previously is used as a custom marker.

Application Flow:

1. First when the user enters his/her details in the registration form and taps on Register and Continue.

2. Here the user will be prompted to either to Capture a Photo or Select an existing photo from the Gallery. Capture Photo functionality has now been implemented clearly using ACTION_IMAGE_CAPTURE. Upon capturing the image, it is written to the phone's internal memory and the File path is returned. The file path is stored in a global variable. Select a photo from Gallery functionality has been implemented using ACTION_PICK and the path of the Image file is stored in a variable.

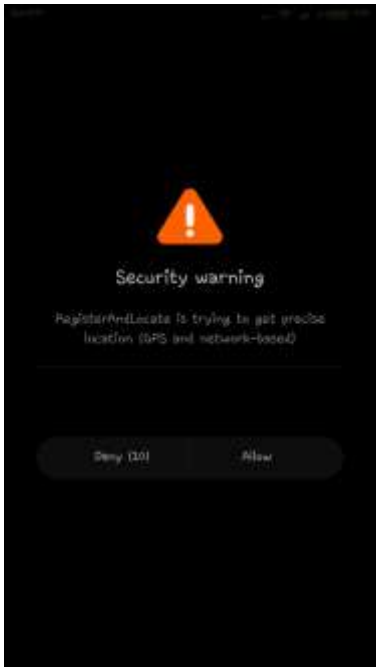

Select a Picture
Hello, Please select an option
Capture
Open Gallery
CONTINUE


Select a Picture
Hello, Please select an option
Capture
Open Gallery
Complete action using
Camera
BeautyPlus
Patrica
Remember my choice

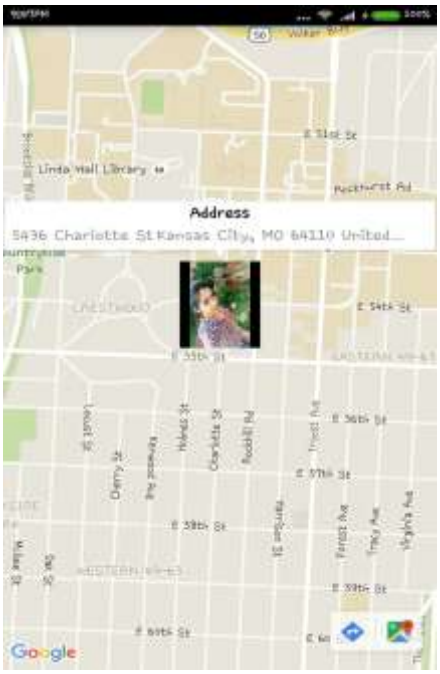

Select a Picture
Hello, Please select an option
Capture
Open Gallery
CONTINUE


Select a photo
ALL
I think i'm afraid to be happy because whenever i get too happy. Something bad always happens.
Trust is more valuable than love because you can't love someone you don't trust.

3. Upon selection, the user is shown the image using **ImageView**. When the user taps on continue, the image path is passed to the redirection intent using **putExtras()** method.



4. In Maps Activity, the data is fetched using **getExtras()** method. The current location of the user is fetched using **LocationListener**. When **onLocationChanged()** method is called, the new location latitude and longitude are returned. These latitude and longitude are used to place a marker on the map.



5. Address of the user is fetched from Latitude and Longitude Reverse Geocode lookup.
6. The file path which has been obtained from the previous activity decoded using **BitmapFactory.decodeFile(String)** method and using **BitmapDescriporFactory.fromBitmap (String)** method is used to place the image of the user as a custom marker on the map.