**ĐẠI HỌC KHOA HỌC TỰ NHIÊN TP.HCM**

**KHOA TOÁN – TIN HỌC**



BÁO CÁO MÔN  
**TÍNH TOÁN DI ĐỘNG**

**Đề tài:**

**PICPIC**

Ứng dụng camera phone

**Giảng viên hướng dẫn:**

TS. Trần Anh Tuấn

**Sinh viên:**

Tạ Hoàng Thảo Vy – 1511353

Contents

[Project Setup 3](#_Toc518253578)

[Requirement: 3](#_Toc518253579)

[How to setup: 3](#_Toc518253580)

[Frontend application: 4](#_Toc518253581)

[Main screen: 4](#_Toc518253582)

[Take photo screen: 5](#_Toc518253583)

[Edit photo screen: 6](#_Toc518253584)

[Backend & functions: 14](#_Toc518253585)

[Load edited photos by GridView 14](#_Toc518253586)

[Camera and editor config: 15](#_Toc518253587)

[Permission: 17](#_Toc518253588)

[Touch listener: 17](#_Toc518253589)

[Class Application: 18](#_Toc518253590)

# Project Setup

## Requirement:

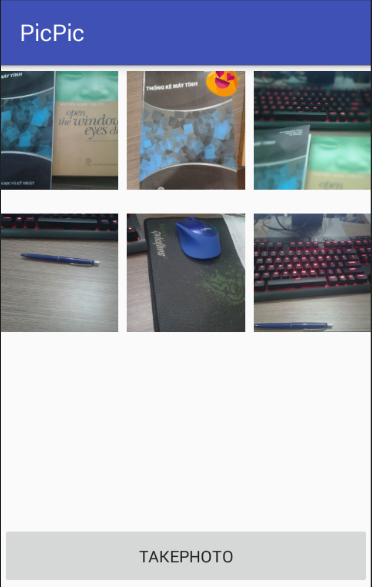
* Android Studio
* Real Android Phone

## How to setup:

* Install what android studio require: build tool, api platform, …
* Build project, if error appear. Clean project and build again.

# Frontend application:

## Main screen:



## Take photo screen:



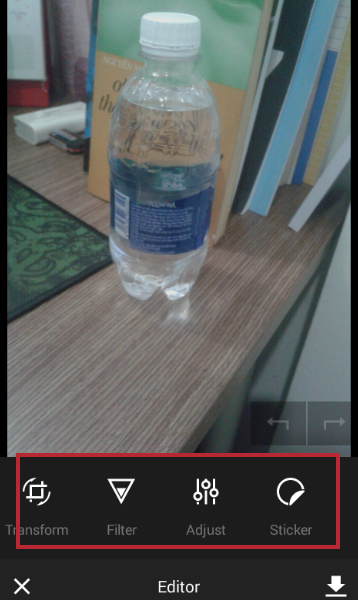
* There are some options while taking the photo



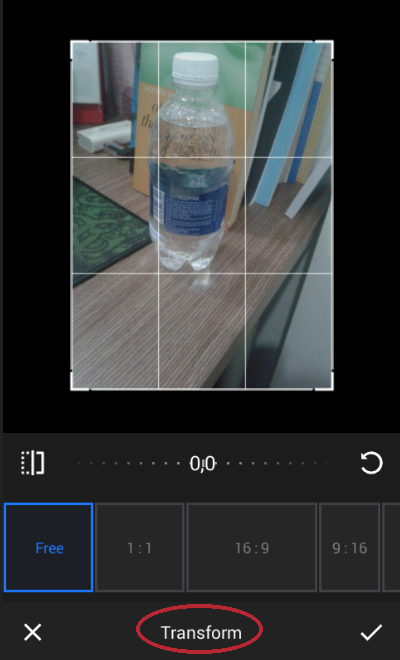
* Change to front camera and active flash mode:



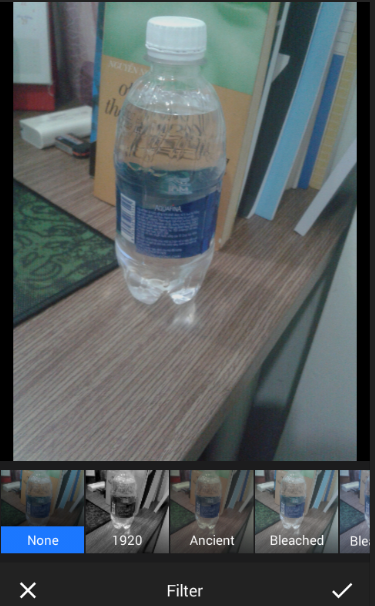
## Edit photo screen:



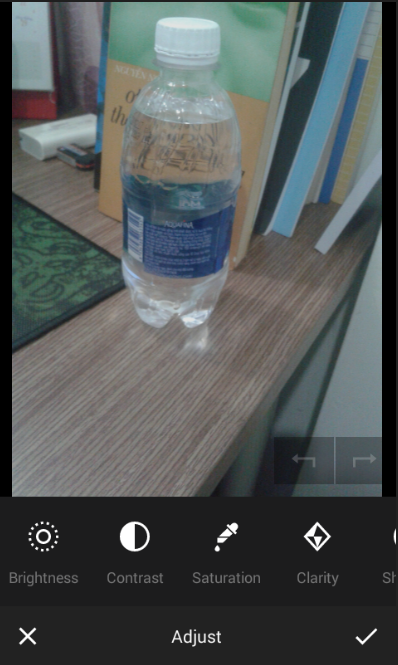
* Transform:



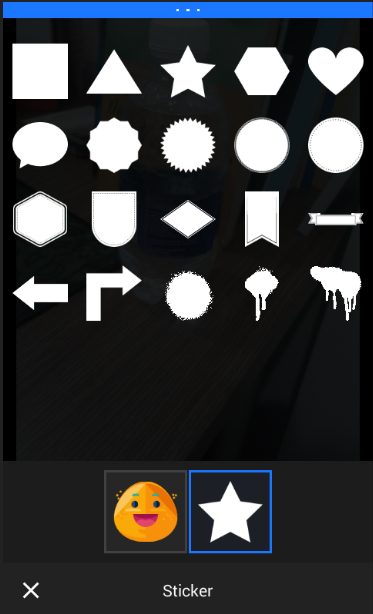
* Filter



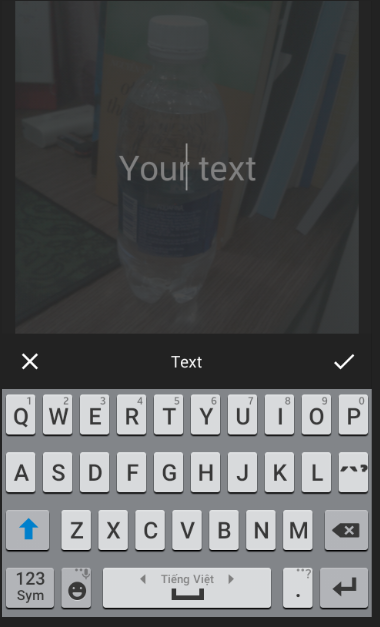
* Adjust: this feature has some more options: Brightness, Contrast, Saturation, Clarity, Shadow, …



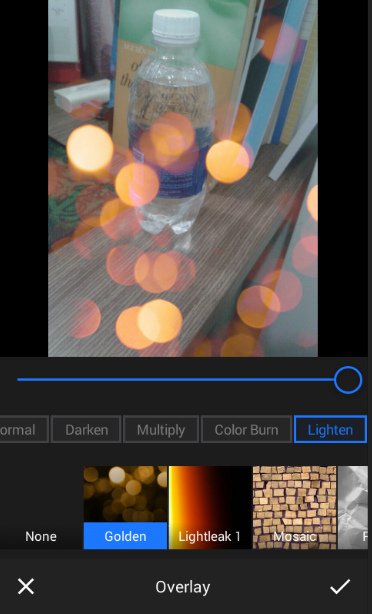
* Sticker:

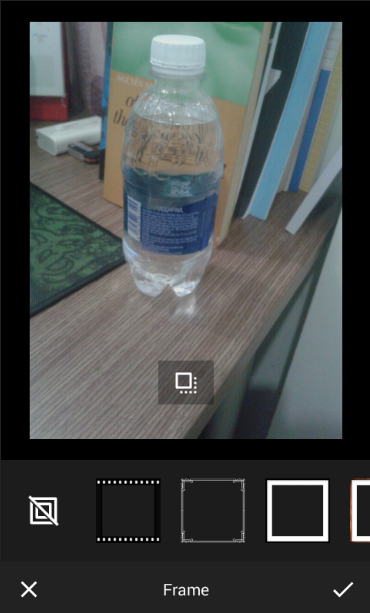
* Text:



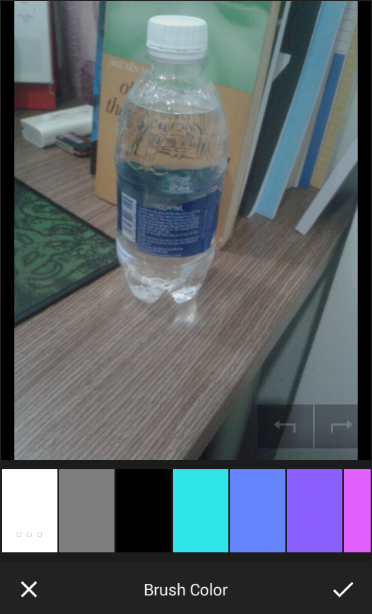
* Overlay:



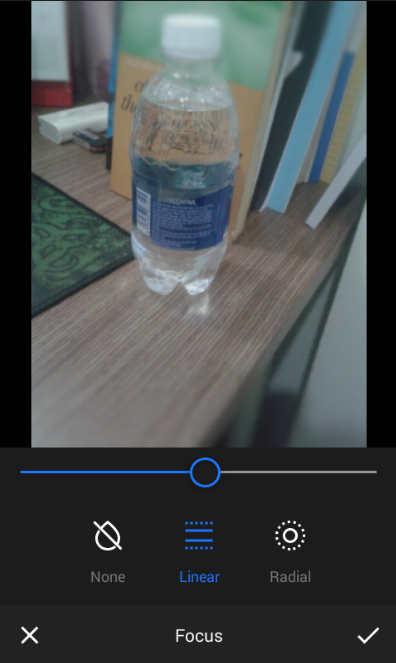
* Frame:



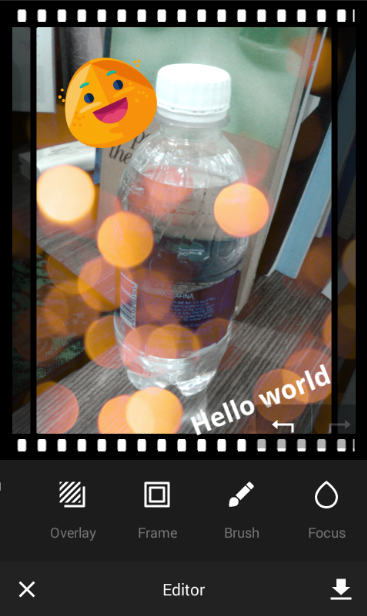
* Brush:



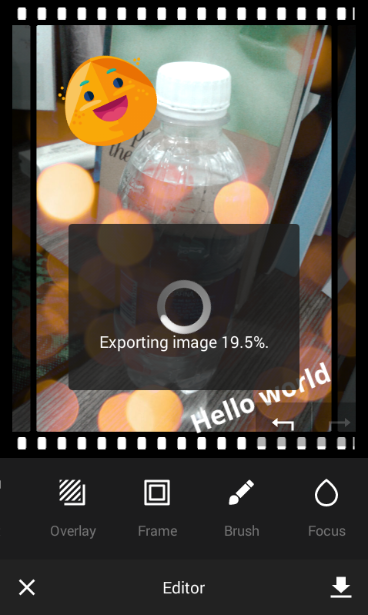
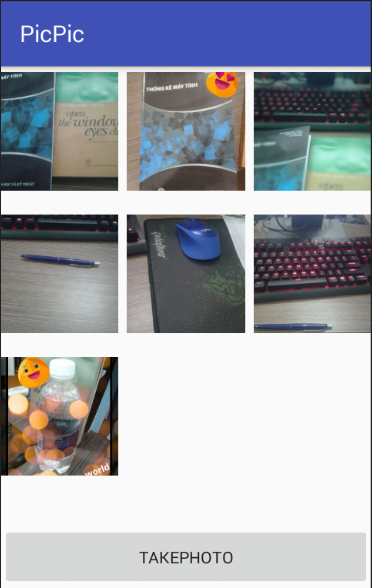
* Focus:



* After all, an example:



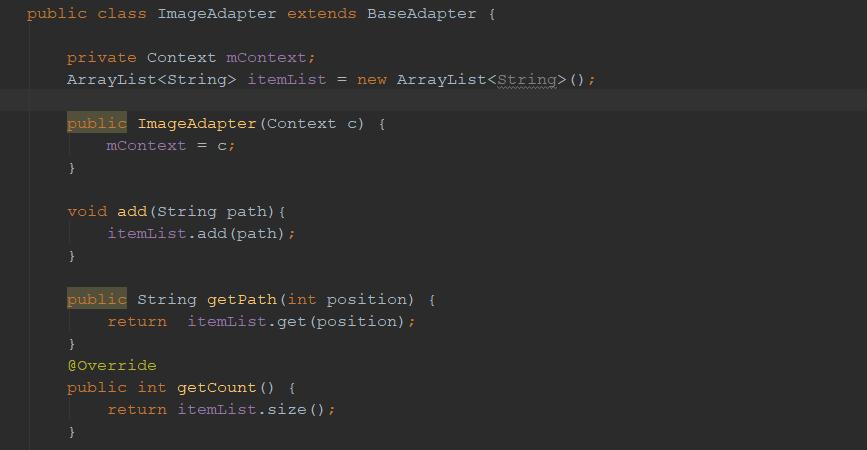
* Save edited image:

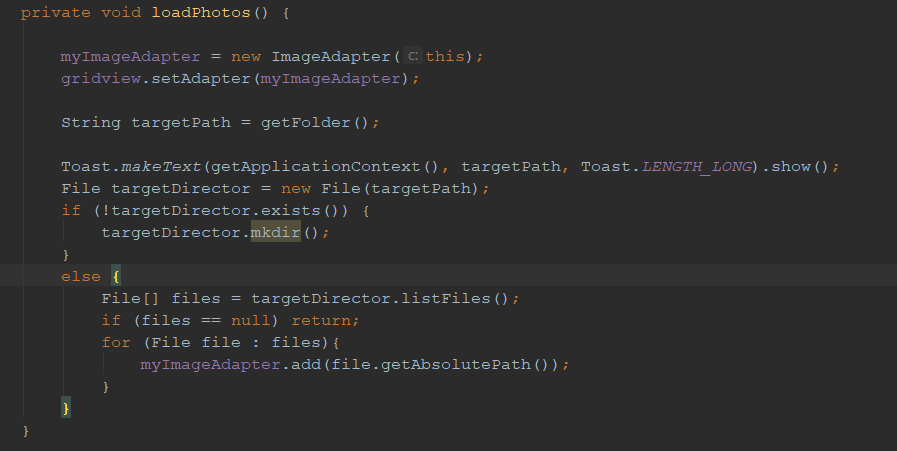
# Backend & functions:

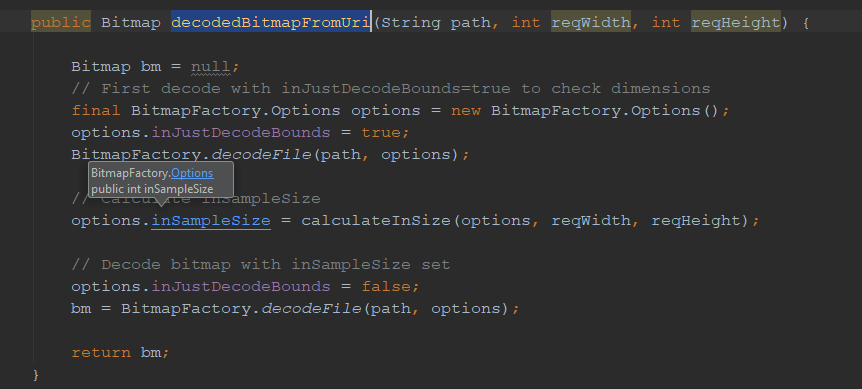
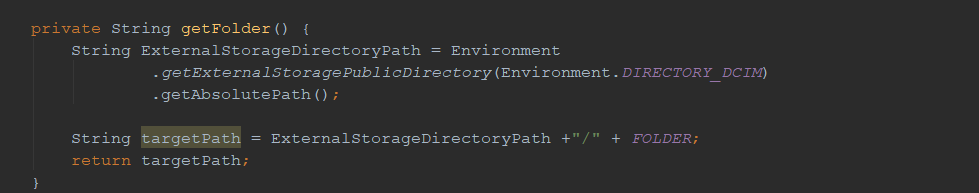
## Load edited photos by GridView

* Class ImageAdapter extends from BaseAdapter is needed for gridView to contain data (images).

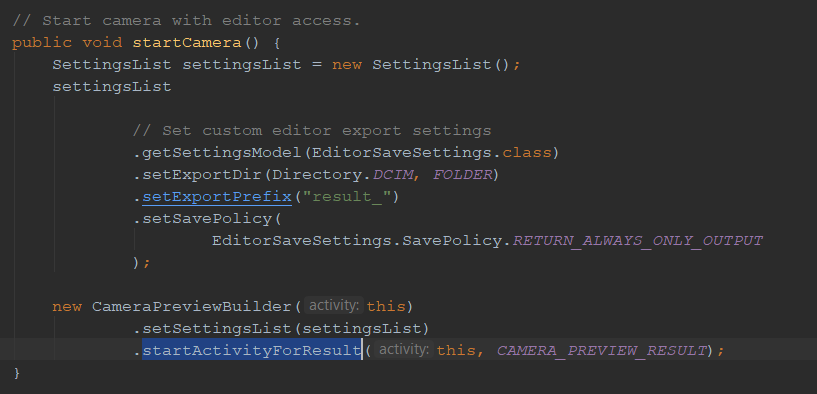


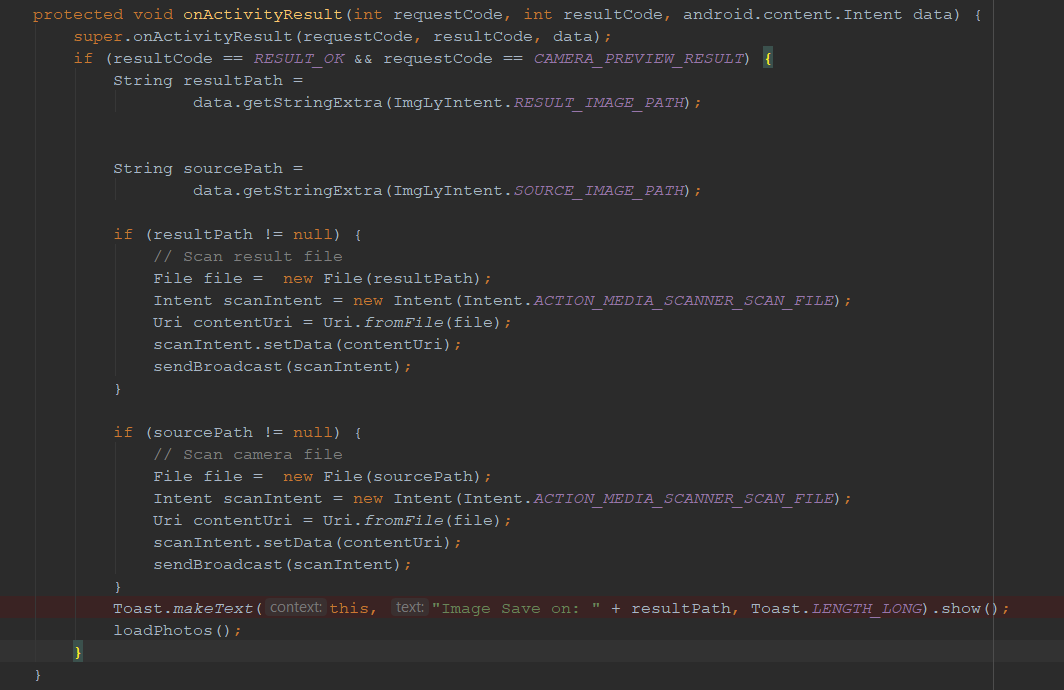
* Function loadPhotos() read photos from device and load to imageAdapter. This function be call every app start and every time you save edited image.

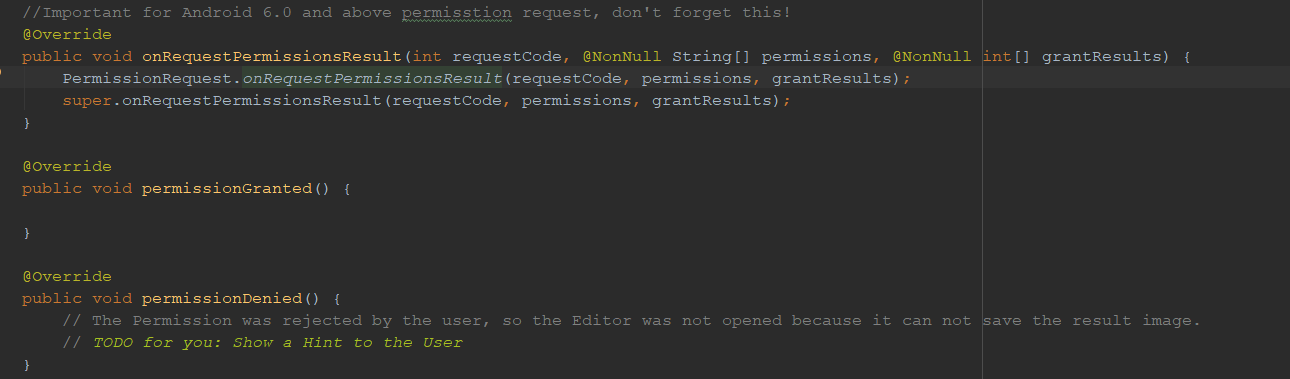


* Photo get from device are encoded. Function decodedBitmapFromUri() to make it visible to user. 
* **Note**: file path is important, unique path is required for save and load photos. I wrote function getFolder() to solve that.

## Camera and editor config:

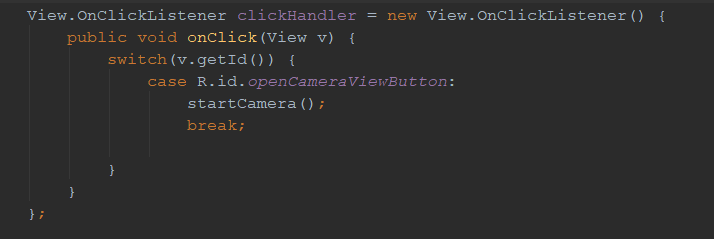
Function startCamera() config some attribute (layout, export directory, export prefix name, save option) and then open the camera with call back. In this case, function is startActivityForResult()**

* Familiar with function startEditor(). Those two function are implemented callback with onActivityResult() - member method of AppCompatActivity class 

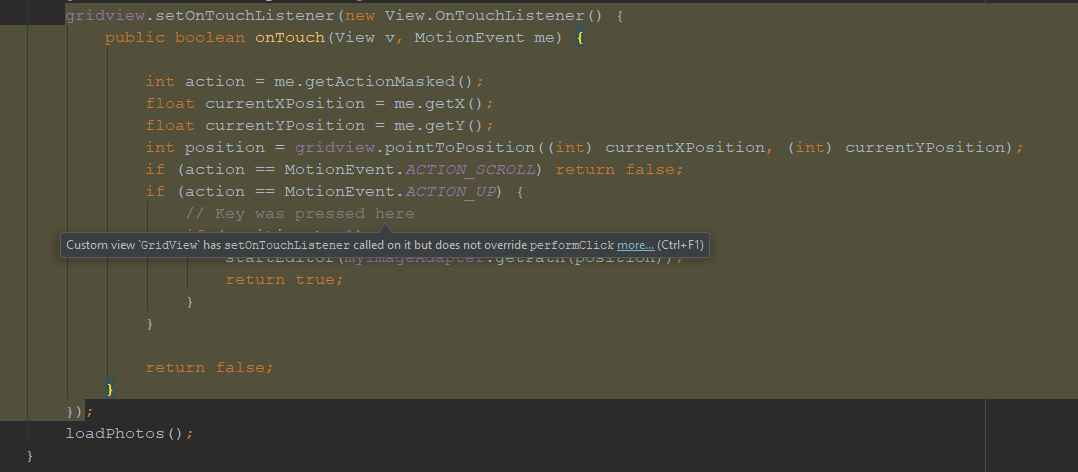
Permission:   
App auto request permission. But i wrote callback to handle if user allow or not. 

## Touch listener:

* Button “Take Photo” adding listener

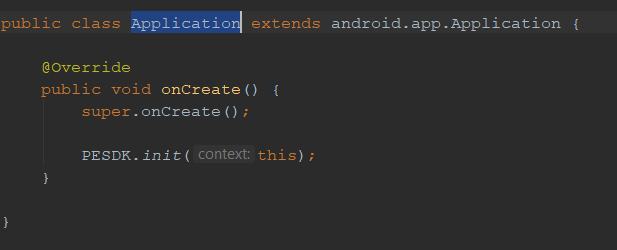


* Photo from gridView adding touch listener

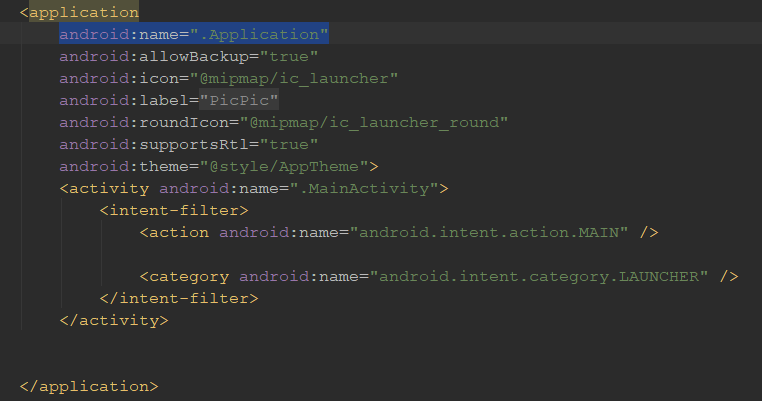


## Class Application:

* I added class Application to initialize camera and editor plugins variables



* Add to AndroidManifest.xml is required.



END.