

EX:NO:15

IMAGE CAPTURE

REG.NO:210701701

DATE:09/05/2024

AIM:-

Develop an android application to capture image using camera and displaying the image using ImageView.

PROCEDURE:-

Step 1: Create a new Android Project.

Step 2: Design the user interface.

Step 3: Implement camera functionality.

Step 4: Display the captured image.

Step 5: Handle permissions.

Step 6: Test the application.

Step 7: Handle edge cases.

Step 8: Optimize and refine.

PRGRAM CODE:-

AndroidManifest.xml:

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.cameraimagecapture">
    <uses-feature android:name="android.hardware.camera" />
    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
    <uses-permission android:name="android.permission.CAMERA" />
```

```
<application
    android:allowBackup="true"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/AppTheme">
    <activity android:name=".MainActivity">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />
            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>
```

```
</manifest>
```

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <ImageView
```

```
        android:id="@+id/imageView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:layout_margin="16dp"
        android:adjustViewBounds="true"
        android:scaleType="centerCrop" />
<Button
    android:id="@+id/buttonCapture"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Capture Image"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="32dp" />
```

```
</RelativeLayout>
```

MainActivity.kt:

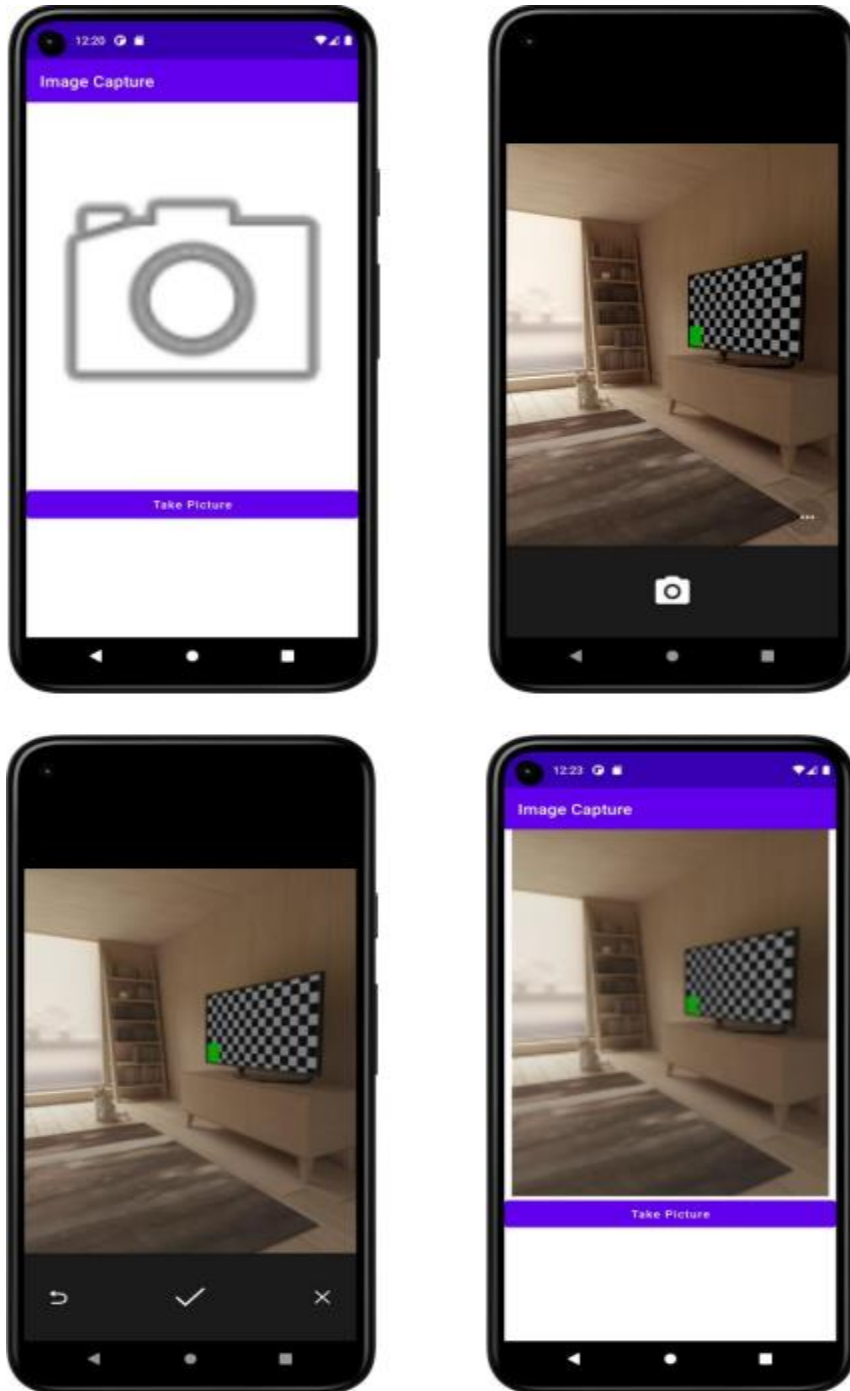
```
package com.example.cameraimagecapture

import android.app.Activity
import android.content.Intent
import android.graphics.BitmapFactory
import android.os.Bundle
import android.provider.MediaStore
```

```
import android.widget.Button
import android.widget.ImageView
import androidx.appcompat.app.AppCompatActivity
class MainActivity : AppCompatActivity() {
    private lateinit var imageView: ImageView
    private lateinit var buttonCapture: Button
    private val REQUEST_IMAGE_CAPTURE = 1
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        imageView = findViewById(R.id.imageView)
        buttonCapture = findViewById(R.id.buttonCapture)
        buttonCapture.setOnClickListener {
            dispatchTakePictureIntent()
        }
    }
    private fun dispatchTakePictureIntent() {
        Intent(MediaStore.ACTION_IMAGE_CAPTURE).also { takePictureIntent ->
            takePictureIntent.resolveActivity(packageManager)?.also {
                startActivityForResult(takePictureIntent,
                REQUEST_IMAGE_CAPTURE)
            }
        }
    }
}
```

```
}  
  
override fun onActivityResult(requestCode: Int, resultCode: Int, data: Intent?) {  
    super.onActivityResult(requestCode, resultCode, data)  
  
    if (requestCode == REQUEST_IMAGE_CAPTURE && resultCode ==  
Activity.RESULT_OK) {  
        val imageBitmap = data?.extras?.get("data") as? android.graphics.Bitmap  
        imageView.setImageBitmap(imageBitmap)  
    }  
}  
}
```

OUTPUT:-



RESULT:-

Thus to develop an android application to capture image using camera and displaying the image using ImageView is implemented and executed successfully.