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" />
```

```xml
    <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
<?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
```

```xml
        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:

```kotlin
package com.example.cameraimagecapture

import android.app.Activity

import android.content.Intent

import android.graphics.BitmapFactory

import android.os.Bundle

import android.provider.MediaStore
```

```kotlin
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)

            }

        }
```
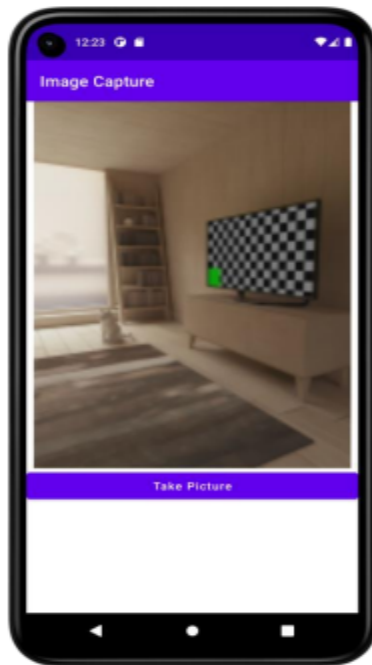
```kotlin
    }

    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.