Ex. No : 4(a)

DRAW BASIC GRAPHICAL PRIMITIVES ON THE SCREEN

Date:

AIM:

To develop an android application that draws basic graphical primitives on the screen using android studio and sdk.

PROCEDURE:

Step 1 : File → NewProject
Provide the application name and Click “Next”

Step 2 : Select the target android devices
Select the minimum SDK to run the application. Click “Next”.

Step 3 : Choose the activity for the application (By default choose “Blank Activity). Click “Next”.

Step 4 : Enter activity name and click "Finish".

Step 5 : Edit the program.

Step 6 : Run the application, 2-ways to run the application.

1. Running through emulator
2. Running through mobile device

SOURCE CODE:-

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.administrator.ex4">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        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:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context="com.example.administrator.ex4.MainActivity">

</RelativeLayout>
```

MainActivity.java

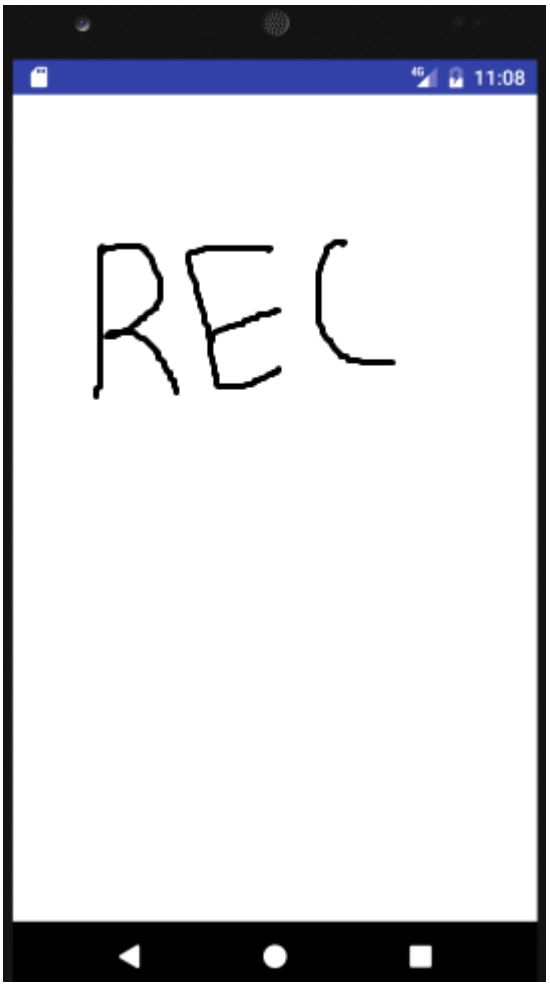
```
package com.example.administrator.ex4;
import android.app.Activity;
import android.os.Bundle;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(new TouchScreen(this,null));
    }
}
```

TouchScreen.java

```
package com.example.administrator.ex4;

import android.content.Context;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.graphics.Path;
import android.util.AttributeSet;
import android.view.MotionEvent;
import android.view.View;


public class TouchScreen extends View {
    Paint paint=new Paint();
    Path path=new Path();

    public TouchScreen(Context context, AttributeSet attributeSet)
    {
        super(context,attributeSet);

        paint.setAntiAlias(true);
        paint.setColor(Color.BLACK);
        paint.setStrokeJoin(Paint.Join.ROUND);
        paint.setStyle(Paint.Style.STROKE);
        paint.setStrokeWidth(5f);
    }

    @Override
    protected void onDraw(Canvas canvas)
    {
        canvas.drawPath(path,paint);
    }
    @Override
    public boolean onTouchEvent(MotionEvent event)
    {
        float X = event.getX();
        float Y = event.getY();
        switch (event.getAction())
        {
            case MotionEvent.ACTION_DOWN:
                // Set a new starting point on finger touch
                path.moveTo(X, Y);
                return true;
            case MotionEvent.ACTION_MOVE:
                // Connect the points
                path.lineTo(X, Y);
                break;
            case MotionEvent.ACTION_UP:
                //Do nothing on finger lift
                break;
            default:
                return false;
        }
```

```
            // Makes our view repaint and call onDraw
            invalidate();
            return true;
        }
}
```

OUTPUT:-



RESULT:

Thus the android application that draws basic graphical primitives on the screen using android studio and sdk was developed successfully.