

Example 3:

Write an application that draws Basic Graphical Primitives on the screen.

Graphical Primitives:

The most important step in drawing a Graphical Primitives to override the **onDraw()** method.

The parameter to **onDraw()** is a Canvas object that the view can use to draw itself.

The Canvas class defines methods for drawing text, lines, bitmaps, and many other graphics primitives. You can use these methods in **onDraw()** to create your custom Graphical Primitives.

The **android.graphics** framework divides drawing into two areas:

- What to draw, handled by **Canvas**.
- How to draw, handled by **Paint**.

For instance, Canvas provides a method to draw a line, while Paint provides methods to define that line's color. Canvas has a method to draw a rectangle, while Paint defines whether to fill that rectangle with a color or leave it empty. Simply put, Canvas defines shapes that you can draw on the screen, while Paint defines the color, style, font, and so forth of each shape you draw. So, before you draw anything, you need to create one or more Paint objects.

In this example, we are going to display 2D graphics in android. In 2D graphics we usually opt for any of the two following options:

1. Graphics or animation object is drawn into View object from layout.
2. We can draw graphics directly onto the canvas.

Android Canvas class encapsulates the bitmaps used as surface. It exposes the draw methods which can be used for designing. Let us first clear the following terms:

- **Bitmap:** The surface being drawn on.
- **Paint:** It lets us specify how to draw the primitives on bitmap. It is also referred to as "Brush".
- **Canvas:** It supplies the draw methods used to draw primitives on underlying bitmap.

Each drawing object specifies a paint object to render. Let us see the few available list of drawing objects and they are as follows:

1. **drawCircle:** This draws a circle on a specified radius centered on a given point.
2. **drawLine(s):** it draws a line (or series of lines) between points.
3. **drawOval:** it draws an oval which is bounded by the area of rectangle.
4. **drawRoundRect:** it draws a rectangle with round edges.
5. **drawText:** It draws a text string on canvas.