

# Customized Views

# Introduction

- ❖ We can create new customized user interface controls either by defining a class that extends `View` or by defining a class that extends one of its child classes, such `TextView`, `EditText`, **and** `Button`.

# Customized Progress Bar

- ❖ We can define a new class that extends `ProgressBar` and adds a new functionality.
- ❖ The following code sample includes the definition for a new type of progress bar that allows the user to move the bar.

# Customized Progress Bar

```
public class MoveableProgressBar extends ProgressBar
{
    public interface OnProgressBarChangeListener
    {
        void onProgressChanged(View v, int progress);
    }

    private OnProgressBarChangeListener listener;

    public MoveableProgressBar(Context context)
    {
        super(context, null, android.R.attr.progressBarStyleHorizontal);
    }

    public void setOnProgressChangeListener(OnProgressBarChangeListener lstnr)
    {
        this.listener = lstnr;
    }
}
```

# Customized Progress Bar

```
@Override
public boolean onTouchEvent(MotionEvent event)
{
    int action = event.getAction();
    if (action == MotionEvent.ACTION_DOWN
        || action == MotionEvent.ACTION_MOVE)
    {
        int progress = 0;
        double x = event.getX();
        double width = getWidth();
        progress = (int) Math.round((double) getMax() * (x / width));
        if (progress < 0)
            progress = 0;
        this.setProgress(progress);
        if (listener != null)
            listener.onProgressChanged(this, progress);
    }
    return true;
}

}
```

# Customized Progress Bar

```
package com.abelski.sample;

import android.app.Activity;
import android.os.Bundle;
import android.widget.LinearLayout;

public class CustomizedViewActivity extends Activity
{
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        LinearLayout layout = new LinearLayout(this);
        MoveableProgressBar bar = new MoveableProgressBar(this);
        layout.addView(bar);
        setContentView(layout);
    }
}
```

# Customized Progress Bar

