# Android 实验1

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## 贺勇

## 软件51

**1.编写计算圆和矩形的面积以及三角形的面积和周长的Java类，**

**并在主类中使用（此为纯Java程序）。**

Circle：

public class Circle {

private double r; //半径

private double area; //面积

private double perimeter; //周长

public Circle(double r){ //构造方法

this.r=r;

}

public void setr(double r){ //设置半径

this.r=r;

}

public double getarea(){ //获得面积

return Math.PI\*r\*r;

}

public double getperimeter(){ //获得周长

return Math.PI\*2\*r;

}

}

矩形：

public class Rectangle {

private double width; //矩形宽

private double height; //矩形高

public Rectangle(double width,double height){ //带参构造

this.width=width;

this.height=height;

}

public void setwidth(double width){ //设置宽

this.width=width;

}

public void setheight(double height){ //设置高

this.height=height;

}

public double getarea(){ //获得面积

return width\*height;

}

public double getperimeter(){ //获得周长

return 2\*(width+height);

}

}

三角形：

public class Triangle {

private double x1,y1,x2,y2,x3,y3; //三点坐标

private double a,b,c,p; //三边长和半周长

public Triangle(double x1,double y1,double x2,double y2,double x3,double y3){

this.x1=x1;

this.x2=x2;

this.x3=x3;

this.y1=y1;

this.y2=y2;

this.y3=y3;

a=Math.sqrt((x1-x2)\*(x1-x2)+(y1-y2)\*(y1-y2));

b=Math.sqrt((x1-x3)\*(x1-x3)+(y1-y3)\*(y1-y3));

c=Math.sqrt((x3-x2)\*(x3-x2)+(y3-y2)\*(y3-y2));

p=(a+b+c)/2;

}

public double getarea(){

return Math.sqrt(p\*(p-a)\*(p-b)\*(p-c));

}

public double getperimeter(){

return p\*2;

}

}

主类:

public static void main(String[] args) {

Circle circle = new Circle(3);

Rectangle rectangle = new Rectangle(4,6);

Triangle triangle = new Triangle(1,1,1,2,2,3);

System.out.println("圆的面积为："+circle.getarea());

System.out.println("圆的周长为："+circle.getperimeter());

System.out.println("矩形的面积为："+rectangle.getarea());

System.out.println("矩形的周长为："+rectangle.getperimeter());

System.out.println("三角形的面积为："+triangle.getarea());

System.out.println("三角形的周长为："+triangle.getperimeter());

}

**2.编写查找1~n范围内的素数的Android程序，**

**其中的n的值是输入的。**

MainActivity.java的部分代码：

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

initItems();

}

List<Integer> l = new ArrayList<>();

for(int i = 0;i<n;i++){

if(isPrime(i))

l.add(i);

}

StringBuilder sb = new StringBuilder();

int count = 0;

for(Integer integer:l){

count++;

sb.append(integer).append(" ");

if(count%8 == 0)

sb.append('\n');

}

tvAnswer.setText(sb.toString());

activity\_main.xml:

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools"

style="@style/AppTheme"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="输入n的值："

/>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<EditText

android:layout\_width="0dp"

android:layout\_height="50dp"

android:id="@+id/et\_input"

android:layout\_weight="3"/>

<Button

android:layout\_width="0dp"

android:layout\_height="50dp"

android:layout\_weight="1"

android:id="@+id/btn\_submit"

android:text="提交"

/>

</LinearLayout>

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="答案："

/>

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/tv\_answer"/>

</LinearLayout>

**3.编写Android程序，能够显示一张发给朋友的贺卡，**

**其中的朋友名和本人名是输入的。**

**格式如下：**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**朋友名,你好！**

**祝你学习愉快！**

**本人名**

**2013年11月10日**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

MainActivity.java部分代码：

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

ButterKnife.bind(this);

}

// OnClick button

public void onClick() {

String friend = editTextFriend.getText()+"";

String yours = editTextYours.getText()+"";

StringBuilder sb = new StringBuilder();

sb.append("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n").append(friend).append(",你好！\n\n")

.append("祝你学习愉快！\n\n").append(yours+"\n").append("2013年11月10日\n")

.append("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

textViewShow.setText(sb.toString());

}

activity\_main.xml:

<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" android:paddingLeft="@dimen/activity\_horizontal\_margin"

android:paddingRight="@dimen/activity\_horizontal\_margin"

android:paddingTop="@dimen/activity\_vertical\_margin"

android:paddingBottom="@dimen/activity\_vertical\_margin" tools:context=".MainActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="朋友名："

android:id="@+id/textView"

android:textSize="20dp"

android:layout\_marginTop="26dp"

android:layout\_alignParentTop="true"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="100dp"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_friend"

android:layout\_above="@+id/textView2"

android:layout\_centerHorizontal="true"

android:textSize="20dp"

android:layout\_alignTop="@+id/textView" />

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="你的名字："

android:id="@+id/textView2"

android:layout\_marginTop="24dp"

android:textSize="20dp"

android:layout\_below="@+id/textView"

android:layout\_alignParentStart="true" />

<EditText

android:layout\_width="100dp"

android:layout\_height="wrap\_content"

android:id="@+id/editText\_yours"

android:layout\_alignTop="@+id/textView2"

android:layout\_alignEnd="@+id/editText\_friend"

android:layout\_alignBottom="@+id/textView2"

android:textSize="20dp"/>

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="预览:"

android:id="@+id/textView3"

android:layout\_marginTop="19dp"

android:layout\_below="@+id/button"

android:layout\_alignParentStart="true"

/>

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text=""

android:id="@+id/textView\_show"

android:layout\_below="@+id/textView3"

android:layout\_alignParentStart="true" />

<Button

style="?android:attr/buttonStyleSmall"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="确定"

android:id="@+id/button"

android:layout\_marginTop="30dp"

android:layout\_below="@+id/textView2"

android:layout\_toEndOf="@+id/textView\_show" />

</RelativeLayout>