

1. En base al programa realizado en clases, crear una nueva aplicación, utilizando los gráficos de los dados, para JUGAR AL CACHO.

Nivel 1: Sólo muestra los dados (5 dados) Activando el boton LANZAR DE NUEVO

Nivel 2: Indica si hay una jugada (ESCALERA (1,2,3,4,5 | 2,3,4,5,6 | 1,3,4,5,6), FULL (2 iguales, 3 iguales), POKER (4 iguales), DORMIDA (5 iguales))

Nivel 3: Permite dar de baja a un dado. Clic sobre el dado y este se da la vuelta: 1→6, 2→5, 3→4.

El trabajo presentado se resuelve el nivel 3 del Laboratorio.

activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/LinearLayout1"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    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.cachogame.MainActivity" >
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<ImageView
    android:id="@+id/imageView1"
    android:layout_width="55dp"
    android:layout_height="55dp"
    android:clickable="true"
    android:focusable="true"
    android:onClick="changeDice"
    android:src="@drawable/zero" />
```

```
<ImageView
    android:id="@+id/imageView2"
    android:layout_width="55dp"
    android:layout_height="55dp"
```

```
        android:clickable="true"
        android:focusable="true"
        android:onClick="changeDice"
        android:src="@drawable/zero" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >

    <ImageView
        android:id="@+id/imageView3"
        android:layout_width="55dp"
        android:layout_height="55dp"
        android:clickable="true"
        android:focusable="true"
        android:onClick="changeDice"
        android:src="@drawable/zero" />

    <ImageView
        android:id="@+id/imageView4"
        android:layout_width="55dp"
        android:layout_height="55dp"
        android:clickable="true"
        android:focusable="true"
        android:onClick="changeDice"
        android:src="@drawable/zero" />

    <ImageView
        android:id="@+id/imageView5"
        android:layout_width="55dp"
        android:layout_height="55dp"
        android:clickable="true"
        android:focusable="true"
        android:onClick="changeDice"
        android:src="@drawable/zero" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:onClick="throwDice"
        android:text="Lanzar"
        android:textSize="12sp" />
```

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="reset"
    android:text="Reiniciar"
    android:textSize="12sp" />
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<TextView
    android:id="@+id/textView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1.88"
    android:text="¿Volteo disponible?"
    android:editable="false"
    android:focusable="false"
    android:textSize="12sp" />
```

```
<EditText
    android:id="@+id/editText1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:ems="10"
    android:editable="false"
    android:focusable="false"
    android:textSize="12sp" >
```

```
    <requestFocus />
```

```
</EditText>
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Posibles Jugadas"
    android:textSize="12sp" />
```

```
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="0.80"
    android:text="Escalera"
    android:textSize="12sp" />
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="12sp"
    android:layout_weight="1"
    android:editable="false"
    android:focusable="false"
    android:ems="10" >
```

```
<requestFocus />
</EditText>
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >
```

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1.42"
    android:text="Full"
    android:textSize="12sp" />
```

```
<EditText
    android:id="@+id/editText3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:textSize="12sp"
    android:editable="false"
    android:focusable="false"
    android:ems="10" >
```

```
<requestFocus />
```

```
</EditText>
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >

    <TextView
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1.11"
        android:text="Poker"
        android:textSize="12sp" />

    <EditText
        android:id="@+id/editText4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:textSize="12sp"
        android:editable="false"
        android:focusable="false"
        android:ems="10" >

        <requestFocus />
    </EditText>
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content" >

    <TextView
        android:id="@+id/textView6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="0.83"
        android:text="Dormida"
        android:textSize="12sp" />

    <EditText
        android:id="@+id/editText5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:textSize="12sp"
        android:editable="false"
        android:focusable="false"
        android:ems="10" >
```

```
        <requestFocus />
    </EditText>
</LinearLayout>
```

```
</LinearLayout>
```

MainActivity.java

```
package com.example.cachogame;

import java.util.Arrays;

import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;

public class MainActivity extends Activity {

    int diceImages[] = { R.drawable.one, R.drawable.two, R.drawable.three,
        R.drawable.four, R.drawable.five,
        R.drawable.six };
    int randNumbers[] = new int[5];

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.main, menu);
        Button butt2 = (Button) this.findViewById(R.id.button2);
        ImageView img1 = (ImageView) this.findViewById(R.id.imageView1);
        ImageView img2 = (ImageView) this.findViewById(R.id.imageView2);
        ImageView img3 = (ImageView) this.findViewById(R.id.imageView3);
        ImageView img4 = (ImageView) this.findViewById(R.id.imageView4);
        ImageView img5 = (ImageView) this.findViewById(R.id.imageView5);
        img1.setClickable(false);
        img2.setClickable(false);
        img3.setClickable(false);
        img4.setClickable(false);
        img5.setClickable(false);
        butt2.setEnabled(false);
        return true;
    }
}
```

```

}

public boolean onOptionsItemSelected(MenuItem item) {
    int id = item.getItemId();
    if (id == R.id.action_settings) {
        return true;
    }
    return super.onOptionsItemSelected(item);
}

public void throwDice(View v) {
    Button butt1 = (Button) this.findViewById(R.id.button1);
    Button butt2 = (Button) this.findViewById(R.id.button2);
    EditText edit1 = (EditText) this.findViewById(R.id.editText1);
    ImageView img1 = (ImageView) this.findViewById(R.id.imageView1);
    ImageView img2 = (ImageView) this.findViewById(R.id.imageView2);
    ImageView img3 = (ImageView) this.findViewById(R.id.imageView3);
    ImageView img4 = (ImageView) this.findViewById(R.id.imageView4);
    ImageView img5 = (ImageView) this.findViewById(R.id.imageView5);

    for (int i = 0; i < randNumbers.length; i++) {
        randNumbers[i] = (int) (Math.random() * 6);
    }

    edit1.setText("SI");
    img1.setImageResource(diceImages[randNumbers[0]]);
    img2.setImageResource(diceImages[randNumbers[1]]);
    img3.setImageResource(diceImages[randNumbers[2]]);
    img4.setImageResource(diceImages[randNumbers[3]]);
    img5.setImageResource(diceImages[randNumbers[4]]);

    calculate();

    butt1.setEnabled(false);
    butt2.setEnabled(true);
    img1.setClickable(true);
    img2.setClickable(true);
    img3.setClickable(true);
    img4.setClickable(true);
    img5.setClickable(true);
}

public void calculate() {
    EditText edit2 = (EditText) this.findViewById(R.id.editText2);
    EditText edit3 = (EditText) this.findViewById(R.id.editText3);
    EditText edit4 = (EditText) this.findViewById(R.id.editText4);
    EditText edit5 = (EditText) this.findViewById(R.id.editText5);

    int cnt[] = {0, 0, 0, 0, 0, 0};
    for (int i = 0; i < randNumbers.length; i++) {

```

```

        cnt[randNumbers[i]]++;
    }
    Arrays.sort(cnt);

    int esc[] = { 0, 1, 1, 1, 1, 1 };
    int full[] = { 0, 0, 0, 0, 2, 3 };
    int poker[] = { 0, 0, 0, 0, 1, 4 };
    int dor[] = { 0, 0, 0, 0, 0, 5 };

    if (Arrays.equals(esc, cnt))
        edit2.setText("SI");
    else
        edit2.setText("NO");

    if (Arrays.equals(full, cnt))
        edit3.setText("SI");
    else
        edit3.setText("NO");

    if (Arrays.equals(poker, cnt))
        edit4.setText("SI");
    else
        edit4.setText("NO");

    if (Arrays.equals(dor, cnt))
        edit5.setText("SI");
    else
        edit5.setText("NO");
}

public void changeDice(View v) {
    ImageView img1 = (ImageView) this.findViewById(R.id.imageView1);
    ImageView img2 = (ImageView) this.findViewById(R.id.imageView2);
    ImageView img3 = (ImageView) this.findViewById(R.id.imageView3);
    ImageView img4 = (ImageView) this.findViewById(R.id.imageView4);
    ImageView img5 = (ImageView) this.findViewById(R.id.imageView5);
    EditText edit1 = (EditText) this.findViewById(R.id.editText1);
    switch (v.getId()) {
        case R.id.imageView1:
            img1 = (ImageView) this.findViewById(R.id.imageView1);
            randNumbers[0] = changeValue(randNumbers[0]);
            img1.setImageResource(diceImages[randNumbers[0]]);
            break;
        case R.id.imageView2:
            img2 = (ImageView) this.findViewById(R.id.imageView2);
            randNumbers[1] = changeValue(randNumbers[1]);
            img2.setImageResource(diceImages[randNumbers[1]]);
            break;
        case R.id.imageView3:
            img3 = (ImageView) this.findViewById(R.id.imageView3);

```



```

        randNumbers[2] = changeValue(randNumbers[2]);
        img3.setImageResource(diceImages[randNumbers[2]]);
        break;
    case R.id.imageView4:
        img4 = (ImageView) this.findViewById(R.id.imageView4);
        randNumbers[3] = changeValue(randNumbers[3]);
        img4.setImageResource(diceImages[randNumbers[3]]);
        break;
    case R.id.imageView5:
        img5 = (ImageView) this.findViewById(R.id.imageView5);
        randNumbers[4] = changeValue(randNumbers[4]);
        img5.setImageResource(diceImages[randNumbers[4]]);
        break;
    default:
        break;
}

calculate();
edit1.setText("NO");
img1.setClickable(false);
img2.setClickable(false);
img3.setClickable(false);
img4.setClickable(false);
img5.setClickable(false);
}

public int changeValue(int x) {
    switch (x) {
        case 0:
            return 5;
        case 1:
            return 4;
        case 2:
            return 3;
        case 3:
            return 2;
        case 4:
            return 1;
        case 5:
            return 0;
    }
    return -1;
}

public void reset(View v) {
    Button butt1 = (Button) this.findViewById(R.id.button1);
    Button butt2 = (Button) this.findViewById(R.id.button2);
    EditText edit1 = (EditText) this.findViewById(R.id.editText1);
    EditText edit2 = (EditText) this.findViewById(R.id.editText2);
    EditText edit3 = (EditText) this.findViewById(R.id.editText3);
}

```

```

EditText edit4 = (EditText) this.findViewById(R.id.editText4);
EditText edit5 = (EditText) this.findViewById(R.id.editText5);
ImageView img1 = (ImageView) this.findViewById(R.id.imageView1);
ImageView img2 = (ImageView) this.findViewById(R.id.imageView2);
ImageView img3 = (ImageView) this.findViewById(R.id.imageView3);
ImageView img4 = (ImageView) this.findViewById(R.id.imageView4);
ImageView img5 = (ImageView) this.findViewById(R.id.imageView5);

edit1.setText("");
edit2.setText("");
edit3.setText("");
edit4.setText("");
edit5.setText("");
img1.setImageResource(R.drawable.zero);
img2.setImageResource(R.drawable.zero);
img3.setImageResource(R.drawable.zero);
img4.setImageResource(R.drawable.zero);
img5.setImageResource(R.drawable.zero);
img1.setClickable(false);
img2.setClickable(false);
img3.setClickable(false);
img4.setClickable(false);
img5.setClickable(false);
butt1.setEnabled(true);
butt2.setEnabled(false);
    }
}

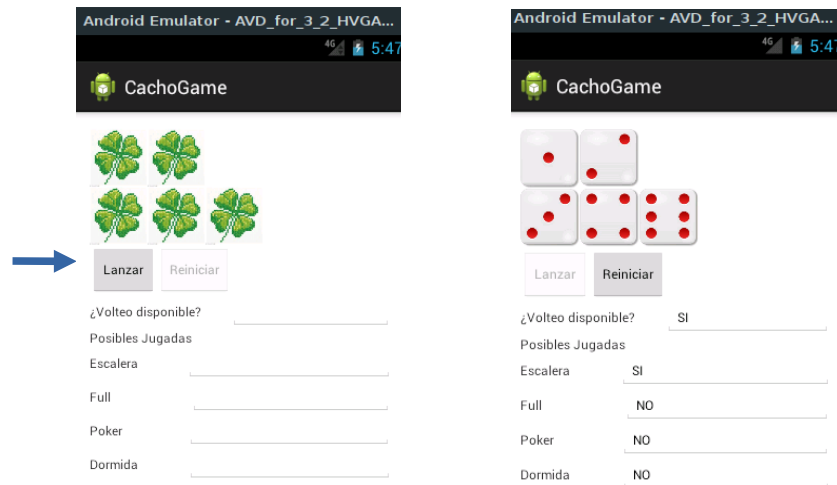
```

Para jugar tome en cuenta que:

- 1) Al presionar el botón "Lanzar" se calculara automáticamente las posibles jugadas (Escalera, Full, Poker y Dormida).
- 2) Solo se podrá voltear dados si se presiono el botón "Lanzar", una vez volteado el dado se calculara automáticamente las posibles jugadas.
- 4) Solo estará disponible el botón "Reiniciar" después de presionar el botón "Lanzar" y viceversa.
- 5) Después de presionar el botón "Reiniciar" todos los valores se reestableceran.

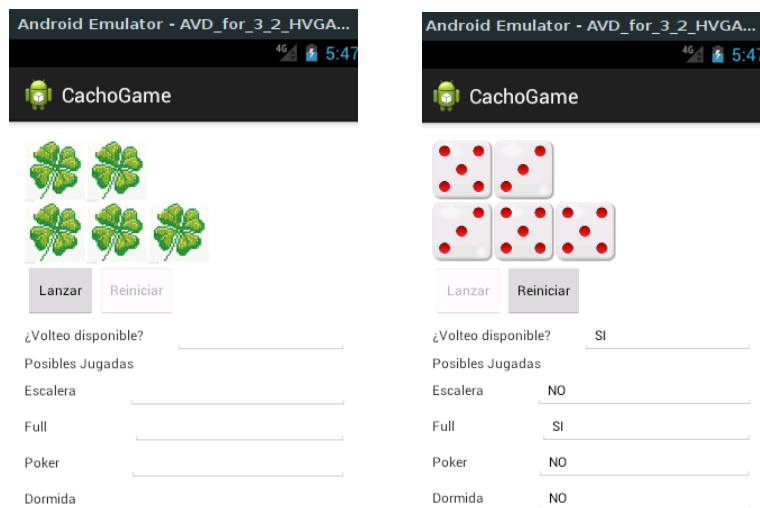
Capturas de pantalla

En esta jugada salio “escalera” y aun se tiene la opción de voltear dado.



(*) Para volver a jugar se debe presionar el botón “reiniciar”.

Aquí otra jugada donde sale “Full” al lanzar y sin voltear dado.



Finalmente otra jugada donde obtenemos “Dormida” después de voltear un dado.

