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// Класс MainActivity
package logic.gamee.codebull;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

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

    public void startSecondActivity(View v) {
        Intent intent = new Intent(this, SecondActivity.class);
        startActivity(intent);
    }

    public void startRulesActivity(View v) {
        Intent intent2 = new Intent(this, RulesActivity.class);
        startActivity(intent2);
    }
}

// Класс RulesActivity
package logic.gamee.codebull;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class RulesActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_rules);
    }

    public void startMainActivity(View v) {
        Intent intent4 = new Intent(this, MainActivity.class);
        startActivity(intent4);
    }
}

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// Класс SecondActivity
package logic.gamee.codebull;

import android.annotation.SuppressLint;
import android.app.AlertDialog;
import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
import java.util.ArrayList;
import java.util.Random;

public class SecondActivity extends AppCompatActivity {
    int attemptCounter=0;
    int digitCounter = 0;
    int num = randomNum();

    private TextView numberView;
    private Button buttonOne;
    private Button buttonTwo;
    private Button buttonThree;
    private Button buttonFour;
    private Button buttonFive;
    private Button buttonSix;
    private Button buttonSeven;
    private Button buttonEight;
    private Button buttonNine;
    private Button buttonZero;
    private Button buttonCancel;
    private Button buttonCheck;
    private TextView resultsView;

    @SuppressWarnings("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second_activity);

        numberView = findViewById(R.id.numberView);
        buttonOne = findViewById(R.id.buttonOne);
        buttonTwo = findViewById(R.id.buttonTwo);
        buttonThree = findViewById(R.id.buttonThree);
        buttonFour = findViewById(R.id.buttonFour);
        buttonFive = findViewById(R.id.buttonFive);
        buttonSix = findViewById(R.id.buttonSix);
        buttonSeven = findViewById(R.id.buttonSeven);
        buttonEight = findViewById(R.id.buttonEight);
        buttonNine = findViewById(R.id.buttonNine);
        buttonZero = findViewById(R.id.buttonZero);
    }
}

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        buttonCancel = findViewById(R.id.buttonCancel);
        buttonCheck = findViewById(R.id.buttonCheck);
        resultsView = findViewById(R.id.resultsView);
    }

    public void onClickOne(View v) {
        buttonOne.setEnabled(false);
        numberView.setText(numberView.getText() + "1");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickTwo(View v) {
        buttonTwo.setEnabled(false);
        numberView.setText(numberView.getText() + "2");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickThree(View v) {
        buttonThree.setEnabled(false);
        numberView.setText(numberView.getText() + "3");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickFour(View v) {
        buttonFour.setEnabled(false);
        numberView.setText(numberView.getText() + "4");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickFive(View v) {
        buttonFive.setEnabled(false);
        numberView.setText(numberView.getText() + "5");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickSix(View v) {
        buttonSix.setEnabled(false);
        numberView.setText(numberView.getText() + "6");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickSeven(View v) {
        buttonSeven.setEnabled(false);
        numberView.setText(numberView.getText() + "7");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickEight(View v) {
        buttonEight.setEnabled(false);
        numberView.setText(numberView.getText() + "8");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickNine(View v) {

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        buttonNine.setEnabled(false);
        numberView.setText(numberView.getText() + "9");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickZero(View v) {
        buttonZero.setEnabled(false);
        numberView.setText(numberView.getText() + "0");
        digitCounterCheck();
        digitZeroCheck();
    }
    public void onClickCancel(View v) {
        clearNum();
        digitCounter = 0;
        buttonZero.setEnabled(false);
    }

    private void clearNum() {
        buttonOne.setEnabled(true);
        buttonTwo.setEnabled(true);
        buttonThree.setEnabled(true);
        buttonFour.setEnabled(true);
        buttonFive.setEnabled(true);
        buttonSix.setEnabled(true);
        buttonSeven.setEnabled(true);
        buttonEight.setEnabled(true);
        buttonNine.setEnabled(true);
        buttonZero.setEnabled(false);
        numberView.setText("");
        buttonCheck.setEnabled(false);
    }

    public void onClickCheck(View v) {
        gameLogic();
        clearNum();
    }

    private ArrayList<Integer> splitStr(int ch) {
        ArrayList<Integer> list = new ArrayList();
        list.add(ch/1000);
        list.add(ch%1000/100);
        list.add(ch%100/10);
        list.add(ch%10);
        return list;
    }

    /** Основная логика игры */
    private void gameLogic() {
        digitCounter = 0;
        ArrayList<Integer> mysteryListNum = splitStr(num);
        int scanNum = Integer.parseInt(numberView.getText().toString());
        String str = "В числе ";
        int bulls = 0;
        int cows = 0;

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        attemptCounter += 1;
        if(attemptCounter < 12){
            ArrayList<Integer> scanListNum = getListNums(scanNum);
            for(int a = 0; a < 4; a++) {
                for (int b = 0; b < 4; b++) {
                    if
(scanListNum.get(a).equals(mysteryListNum.get(b))) {
                        if (a == b) bulls += 1;
                        else cows += 1;
                    }
                }
            }
            if (bulls == 4) showInfoAlert("Число " + scanNum + "
угадано, ПОБЕДА!");
            else {
                resultsView.setText(resultsView.getText() + "\n" +
attemptCounter + ") " + str + scanNum + " " + bulls + " быков и " + cows
+ " коров." );
                if (attemptCounter == 11) showInfoAlert( "Попытки
кончились. поражение" + "\n" + "Загаданное число - " + num );
            }
        }
        else showInfoAlert( "Попытки кончились. поражение" + "\n" +
"Загаданное число - " + num );
    }

    /** Получение из введенной строки листа цифр*/
    private ArrayList<Integer> getListNums(int scanNum) {
        ArrayList<Integer> scanListNum = splitStr(scanNum);
        return scanListNum;
    }

    /** Генерация случайного числа */
    public int randomNum() {
        Random r = new Random();
        int d1 = r.nextInt(8) + 1;
        int d2 = r.nextInt(9);
        int d3 = r.nextInt(9);
        int d4 = r.nextInt(9);
        while (d1 == d2 || d1 == d3 || d1 == d4 || d2 == d3 || d2 == d4
|| d3 == d4) {
            if (d1 == d2 || d2 == d3 || d2 == d4) {
                d2 = r.nextInt(9);
            }
            if (d1 == d3 || d2 == d3 || d3 == d4) {
                d3 = r.nextInt(9);
            }
            if (d1 == d4 || d2 == d4 || d3 == d4) {
                d4 = r.nextInt(9);
            }
        }
        return Integer.parseInt(d1 + "" + d2 + "" + d3 + "" + d4);
    }
}

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/** Проверка, что введено не более 4х цифр */
public void digitCounterCheck() {
    digitCounter++;
    if (digitCounter == 4) {
        blockButtons();
        buttonCheck.setEnabled(true);
    }
}

/** Проверка, что первая цифра не ноль */
public void digitZeroCheck() {
    if (digitCounter > 0 && digitCounter < 4) {
        buttonZero.setEnabled(true);
    }
}

public void blockButtons() {
    buttonOne.setEnabled(false);
    buttonTwo.setEnabled(false);
    buttonThree.setEnabled(false);
    buttonFour.setEnabled(false);
    buttonFive.setEnabled(false);
    buttonSix.setEnabled(false);
    buttonSeven.setEnabled(false);
    buttonEight.setEnabled(false);
    buttonNine.setEnabled(false);
    buttonZero.setEnabled(false);
}

private void showInfoAlert(String textAlert) {
    AlertDialog.Builder alertBuilder = new
AlertDialog.Builder(SecondActivity.this);
    alertBuilder.setTitle("Внимание!!!")
        .setMessage(textAlert)
        .setCancelable(false)
        .setPositiveButton("Выход в меню", new
DialogInterface.OnClickListener() {
            @Override
            public void onClick(DialogInterface dialogInterface,
int i) {
                Intent intent = new Intent(SecondActivity.this,
MainActivity.class);
                startActivity(intent);
            }
        });
    AlertDialog dialog = alertBuilder.create();
    dialog.show();
}
}

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