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package com.example.tesseractmodule3;

import android.Manifest;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.media.MediaPlayer;
import android.net.Uri;
import android.os.Environment;
import android.support.annotation.NonNull;
import android.support.v4.app.ActivityCompat;
import android.support.v4.content.ContextCompat;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;

import com.example.tesseractmodule3.View.WritingView;
import com.googlecode.tesseract.android.TessBaseAPI;

import java.io.File;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStream;
import java.io.OutputStream;
import java.util.Timer;
import java.util.TimerTask;
import java.util.UUID;

public class BHAAActivity extends AppCompatActivity {

    public static final String TESS_DATA = "/tessdata";
    private static final String TAG = MainActivity.class.getSimpleName();
    private TessBaseAPI tessBaseAPI;
    private String mCurrentPhotoPath;

    Uri outputFileDir;

    WritingView wv;
    TextView Out;
    Button clr;
    TextView shows;

    private static final int PERMISSION_REQUEST_STORAGE = 1;
    MediaPlayer word,tryagain;

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@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_bha);
    if (ContextCompat.checkSelfPermission(BHAAActivity.this,
Manifest.permission.WRITE_EXTERNAL_STORAGE) != PackageManager.PERMISSION_GRANTED) {
        if
(ActivityCompat.shouldShowRequestPermissionRationale(BHAAActivity.this,
Manifest.permission.WRITE_EXTERNAL_STORAGE)) {
            ActivityCompat.requestPermissions(BHAAActivity.this,new
String[] {Manifest.permission.READ_EXTERNAL_STORAGE},98);
            ActivityCompat.requestPermissions(BHAAActivity.this, new
String[] {Manifest.permission.WRITE_EXTERNAL_STORAGE}, PERMISSION_REQUEST_STORAGE);

        } else {
            ActivityCompat.requestPermissions(BHAAActivity.this,new
String[] {Manifest.permission.READ_EXTERNAL_STORAGE},91);
            ActivityCompat.requestPermissions(BHAAActivity.this, new
String[] {Manifest.permission.WRITE_EXTERNAL_STORAGE}, PERMISSION_REQUEST_STORAGE);
        }
    }

    Out = findViewById(R.id.output);
    Button result = findViewById(R.id.verify);
    wv = findViewById(R.id.writingview);
    clr = findViewById(R.id.clear);
    shows = findViewById(R.id.show);

    tryagain = MediaPlayer.create(this,R.raw.tryagain);

    word = MediaPlayer.create(this,R.raw.bha);

    checkPermission();
    prepareTessData();

    shows.setText("॥");

    result.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {

            checkPermission();
            saveimage();

            if(shows.getText().toString().equals("॥") &&
(Out.getText().toString().equals("॥") || Out.getText().toString().equals("क्या") ||
Out.getText().toString().equals("सम") || Out.getText().toString().equals("भै") ||
Out.getText().toString().equals("मृ") || Out.getText().toString().equals("ऐ"))){

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        word.start();
        new Timer().schedule(new TimerTask() {
            @Override
            public void run() {
                // this code will be executed after 4 seconds
                word.stop();
                word.reset();
            }
        }, 3000);

        new Timer().schedule(new TimerTask() {
            @Override
            public void run() {
                // this code will be executed after 4 seconds
                Intent intent = new Intent(BHAAActivity.this,
MAActivity.class);

                finish();
                startActivity(intent);
            }
        }, 4000);
    }
    else {
        tryagain.start();
        new Timer().schedule(new TimerTask() {
            @Override
            public void run() {
                // this code will be executed after 2 seconds
                tryagain.stop();
                tryagain.reset();
            }
        }, 2000);

        new Timer().schedule(new TimerTask() {
            @Override
            public void run() {
                // this code will be executed after 4 seconds
                Intent intent1 = getIntent();
                finish();
                startActivity(intent1);
            }
        }, 4000);
    }
}

});

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clr.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

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        checkPermission();
        Intent intent = getIntent();
        finish();
        startActivity(intent);
    }
});
}

@Override
public void onRequestPermissionsResult(int requestCode, @NonNull String[]
permissions, @NonNull int[] grantResults) {
    switch (requestCode){
        case PERMISSION_REQUEST_STORAGE: {
            if (grantResults.length>0 && grantResults[0] ==
PackageManager.PERMISSION_GRANTED){
                if(ContextCompat.checkSelfPermission(BHAAActivity.this,
Manifest.permission.WRITE_EXTERNAL_STORAGE)==PackageManager.PERMISSION_GRANTED){
                    Toast.makeText(this,"Permission
Granted",Toast.LENGTH_SHORT).show();
                }else{
                    Toast.makeText(this,"You don't have
Permission!!",Toast.LENGTH_SHORT).show();
                }
            }
        }
    }
}

private void checkPermission() {
    if (ContextCompat.checkSelfPermission(getApplicationContext(),
Manifest.permission.READ_EXTERNAL_STORAGE) != PackageManager.PERMISSION_GRANTED) {
        ActivityCompat.requestPermissions(this, new
String[]{Manifest.permission.READ_EXTERNAL_STORAGE}, 120);
    }
    if (ContextCompat.checkSelfPermission(getApplicationContext(),
Manifest.permission.WRITE_EXTERNAL_STORAGE) != PackageManager.PERMISSION_GRANTED) {
        ActivityCompat.requestPermissions(this, new
String[]{Manifest.permission.WRITE_EXTERNAL_STORAGE}, 121);
    }
}

public void saveimage() {

    ActivityCompat.requestPermissions(BHAAActivity.this, new
String[]{Manifest.permission.WRITE_EXTERNAL_STORAGE}, 100);

    View content = ww;
    content.setDrawingCacheEnabled(true);
}

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        content.setDrawingCacheQuality(View.DRAWING_CACHE_QUALITY_HIGH);
        Bitmap bitmap = content.getDrawingCache();
        String path = Environment.getExternalStorageDirectory().getAbsolutePath();
        File file = new File(path + "/" + "." + UUID.randomUUID().toString()
+ ".png");
        FileOutputStream ostream;
        try {
            file.createNewFile();
            ostream = new FileOutputStream(file);
            bitmap.compress(Bitmap.CompressFormat.PNG, 100, ostream);
            ostream.flush();
            ostream.close();

        } catch (Exception e) {
            e.printStackTrace();
            Toast.makeText(BHAAActivity.this, "Not Saved",
Toast.LENGTH_SHORT).show();
        }

        mCurrentPhotoPath = file.getAbsolutePath();

        startOCR(outputFileDir);

    }

    private void prepareTessData(){
        try{
            File dir = getExternalFilesDir(TESS_DATA);
            if(!dir.exists()){
                if (!dir.mkdir()) {
                    Toast.makeText(getApplicationContext(), "The folder " +
dir.getPath() + "was not created", Toast.LENGTH_SHORT).show();
                }
            }
            String fileList[] = getAssets().list("");
            for(String fileName : fileList){
                String pathToDataFile = dir + "/" + fileName;
                if(!(new File(pathToDataFile)).exists()){
                    InputStream in = getAssets().open(fileName);
                    OutputStream out = new FileOutputStream(pathToDataFile);
                    byte [] buff = new byte[1024];
                    int len ;
                    while(( len = in.read(buff)) > 0){
                        out.write(buff,0,len);
                    }
                    in.close();
                    out.close();
                }
            }
        }catch (IOException e){

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        e.printStackTrace();
    }
    catch (NullPointerException e){
        e.printStackTrace();
    }
    catch (Exception e) {
        Log.e(TAG, e.getMessage());
    }
}

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private void startOCR(Uri imageUri){
    try{

        BitmapFactory.Options options = new BitmapFactory.Options();
        options.inJustDecodeBounds = false;
        options.inSampleSize = 6;
        Bitmap bitmap = BitmapFactory.decodeFile(mCurrentPhotoPath, options);
        String result = this.getText1(bitmap);
        Out.setText(result);
    }catch (Exception e){
        Log.e(TAG, e.getMessage());
    }
}

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private String getText1(Bitmap bitmap){
    try{
        tessBaseAPI = new TessBaseAPI();
    }catch (Exception e){
        Log.e(TAG, e.getMessage());
    }

    String dataPath = getExternalFilesDir("/").getPath() + "/";
    tessBaseAPI.init(dataPath, "hin", TessBaseAPI.OEM_TESSERACT_ONLY);
    tessBaseAPI.setImage(bitmap);
    String retStr = "No result";

    try{
        retStr = tessBaseAPI.getUTF8Text();
    }catch (Exception e){
        Log.e(TAG, e.getMessage());
    }
    tessBaseAPI.end();
    return retStr;
}

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}

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