

Tugas 6 Store Data

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3SC6

Tutorial Internal storage

1. Buka class **MainActivity.java** lalu isikan seperti ini :

```
import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStreamReader;

public class MainActivity extends AppCompatActivity {
    EditText editTextFileName, editTextData;
    Button saveButton, readButton;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        editTextFileName=findViewById(R.id.editText1);
        editTextData=findViewById(R.id.editText2);
        saveButton=findViewById(R.id.button1);
        readButton=findViewById(R.id.button2);

        saveButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View arg0) {
                /* Melakukan inialisasi nilai variabel filename dan data
ketika user menyentuh tombol */
                String filename=editTextFileName.getText().toString();
                String data=editTextData.getText().toString();
                // Membuat variabel bernama fos bertipe FileOutputStream
                FileOutputStream fos;
                try {
                    // Melakukan Inialisasi nilai fos yang merupakan variabel objek
                    fos = openFileOutput(filename, Context.MODE_PRIVATE);
                    //default mode is PRIVATE, can be APPEND etc.
                    // Menuliskan data ke Internal Storage
                    fos.write(data.getBytes());
                    fos.close();

                    Toast.makeText(getApplicationContext(),filename + "
saved",
                                Toast.LENGTH_LONG).show();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        });
    }
}
```

```

        } catch (FileNotFoundException e) {e.printStackTrace();}
        catch (IOException e) {e.printStackTrace();}

    }

});

// Ketika tombol Read disentuh
readButton.setOnClickListener(new View.OnClickListener() {

    @Override
    public void onClick(View arg0) {
        String filename=editTextFileName.getText().toString();

        StringBuffer stringBuffer = new StringBuffer();
        try {
            /* Menambahkan BufferedReader untuk FileInputStream
dengan bantuan InputStreamReader untuk membaca nilai */
            BufferedReader inputReader = new BufferedReader(new
InputStreamReader(
                openFileInput(filename)));
            String inputString;
            // Membaca data per-baris dan mengirimkannya ke stringBuffer
            while ((inputString = inputReader.readLine()) != null)
            {
                stringBuffer.append(inputString + "\n");
            }

        } catch (IOException e) {
            e.printStackTrace();
        }
        // Menampilkan data ke Toast

Toast.makeText(getApplicationContext(), stringBuffer.toString(), Toast.LENGTH
_LONG).show();

    }

});
}
}

```

2. Lalu buka layout **activity_main.xml** lalu isikan seperti ini :

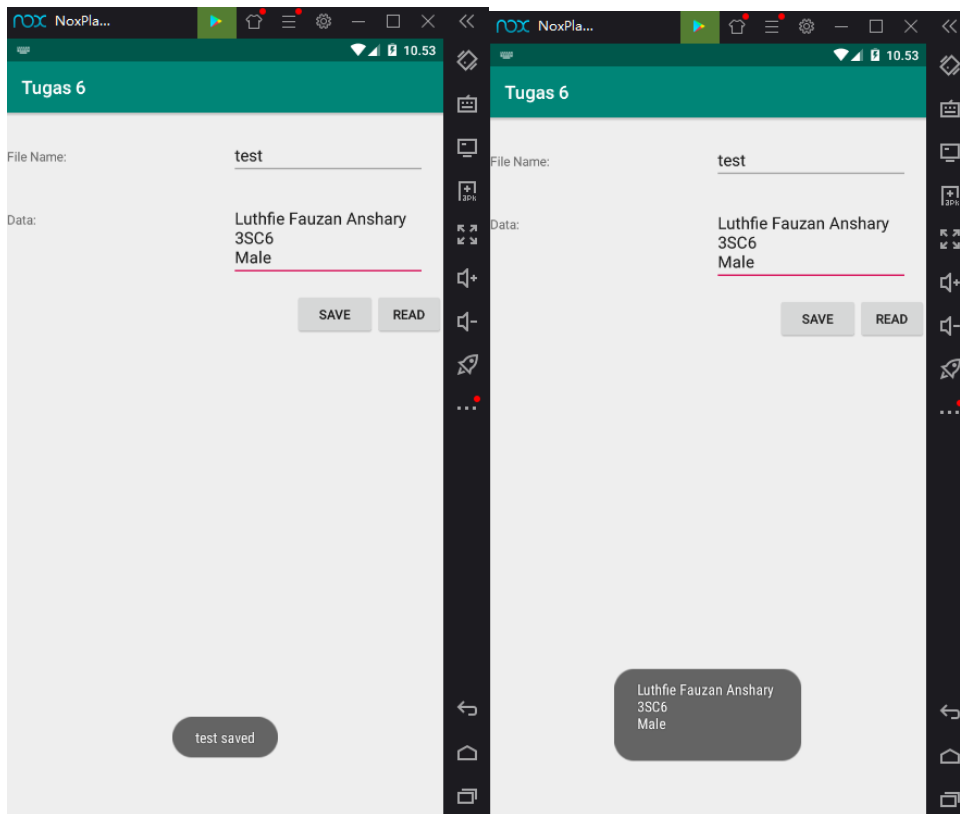
```

<?xml version="1.0" encoding="utf-8"?>
<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"
    tools:context=".MainActivity" >
    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_alignParentTop="true"
        android:layout_marginRight="20dp"
        android:layout_marginTop="24dp"
        android:ems="10" >

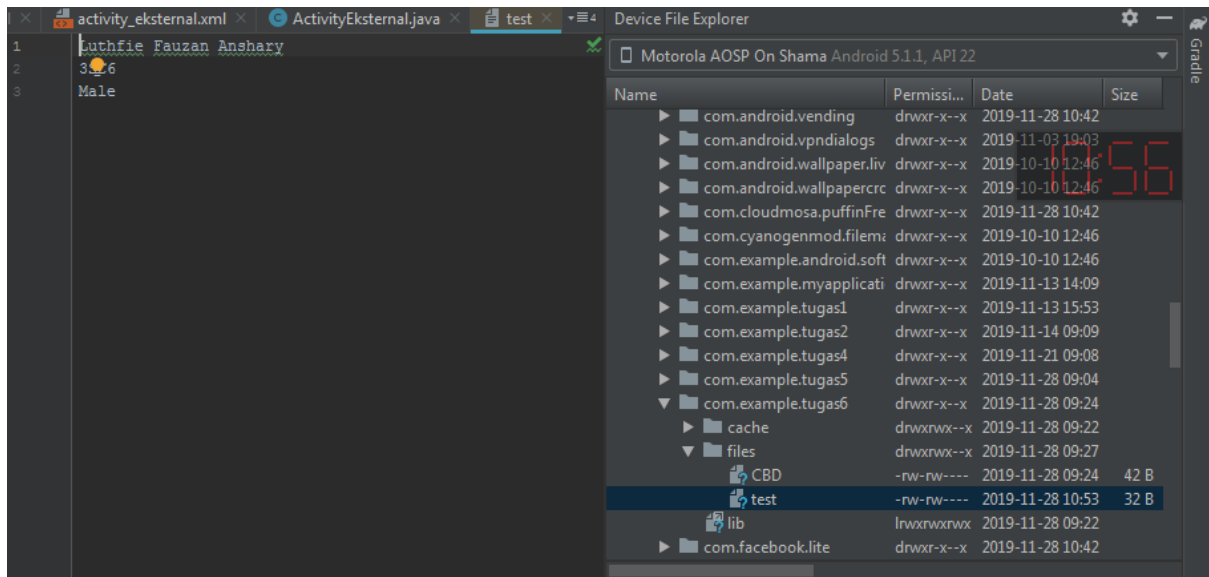
```

```
        <requestFocus />
    </EditText>
    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignRight="@+id/editText1"
        android:layout_below="@+id/editText1"
        android:layout_marginTop="24dp"
        android:ems="10" />
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/editText1"
        android:layout_alignBottom="@+id/editText1"
        android:layout_alignParentLeft="true"
        android:text="File Name:" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/editText2"
        android:layout_alignBottom="@+id/editText2"
        android:layout_alignParentLeft="true"
        android:text="Data:" />
    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/editText2"
        android:layout_below="@+id/editText2"
        android:layout_marginLeft="70dp"
        android:layout_marginTop="16dp"
        android:text="save" />
    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignBaseline="@+id/button1"
        android:layout_alignBottom="@+id/button1"
        android:layout_toRightOf="@+id/button1"
        android:text="read" />
</RelativeLayout>
```

3. Lalu run projectnya jadi seperti ini



4. Lalu data bisa dilihat dengan cara pencet **CTRL+Shift+A** lalu ketik **device file explorer** buka **data/data/<nama project>/files/<nama file yg dibikin>** seperti ini



Tutorial external storage

1. Buat java class baru bernama **ActivityEksternal.java** lalu isikan seperti ini :

```
package com.example.tugas6;

import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import java.io.BufferedReader;
import java.io.DataInputStream;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStreamReader;

public class ActivityEksternal extends AppCompatActivity {
    EditText inputText;
    TextView response;
    Button saveButton, readButton;

    // Membuat nama file
    private String filename = "SampleFile.txt";
    // Membuat nama folder penyimpanan
    private String filepath = "MyFileStorage";
    // Membuat objek kelas File
    File myExternalFile;
    // Menginisialisasi nilai awal variabel myData
    String myData = "";

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

        inputText = (EditText) findViewById(R.id.myInputText);
        response = (TextView) findViewById(R.id.response);

        saveButton = (Button) findViewById(R.id.saveExternalStorage);
        saveButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try {
                    // Membuat objek FileOutputStream untuk proses penyimpanan output file
                    FileOutputStream fos = new
FileOutputStream(myExternalFile);
                    // Menuliskan isi file berdasarkan inputan user
                    fos.write(inputText.getText().toString().getBytes());
                    // Menutup proses tulis
                    fos.close();
                } catch (IOException e) {
                    e.printStackTrace();
                }
            }
        });
        // Mengatur nilai kosong jika user menyentuh tombol tanpa mengisi text
    }
}
```

```

        inputText.setText("");
// Memberikan respon setelah user menyentuh tombol simpan
        response.setText("SampleFile.txt saved to External
Storage...");
    }
});

readButton = (Button) findViewById(R.id.getExternalStorage);
readButton.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        try {
            FileInputStream fis = new
FileInputStream(myExternalFile);
// Membuat objek DataInputStream untuk mengambil objek file
            DataInputStream in = new DataInputStream(fis);
// Membuat objek BufferedReader untuk membaca isi file
            BufferedReader br = new BufferedReader(new
InputStreamReader(in));
// Membuat variabel penampung nilai text di file
            String strLine;
// Melakukan pengecekan text file kosong atau tidak
            while ((strLine = br.readLine()) != null) {
                /* Jika file tidak kosong, variabel myData
sebelumnya yang kosong akan diisi dengan nilai text di strLine */
                myData = myData + strLine;
            }
            in.close();
        } catch (IOException e) {
            e.printStackTrace();
        }
        inputText.setText(myData);
        response.setText("SampleFile.txt data retrieved from
Internal Storage...");
    }
});

// Mengecek status Eksternal Storage apakah available
// Jika tidak maka tombol simpan akan disable
if (!isExternalStorageAvailable() || isExternalStorageReadOnly()) {
    saveButton.setEnabled(false);
}
else {
    myExternalFile = new File(getExternalFilesDir(filepath),
filename);
}

// Proses pengecekan Eksternal Storage read only atau tidak
private static boolean isExternalStorageReadOnly() {
    String extStorageState = Environment.getExternalStorageState();
    if (Environment.MEDIA_MOUNTED_READ_ONLY.equals(extStorageState)) {
        return true;
    }
    return false;
}

// Proses pengecekan Eksternal Storage available atau tidak
private static boolean isExternalStorageAvailable() {
    String extStorageState = Environment.getExternalStorageState();
    if (Environment.MEDIA_MOUNTED.equals(extStorageState)) {
        return true;
    }
}

```

```

        return false;
    }
}

```

2. Lalu buat layout baru bernama **activity_eksternal.xml** lalu isikan seperti ini :

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent" android:layout_height="fill_parent"
    android:orientation="vertical">
    <TextView android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:text="Reading and Writing to External Storage"
        android:textSize="24sp"/>
    <EditText android:id="@+id/myInputText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10" android:lines="5"
        android:minLines="3" android:gravity="top|left"
        android:inputType="textMultiLine">
        <requestFocus />
    </EditText>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:weightSum="1.0"
        android:layout_marginTop="20dp">
        <Button android:id="@+id/saveExternalStorage"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="SAVE"
            android:layout_weight="0.5"/>
        <Button android:id="@+id/getExternalStorage"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_weight="0.5"
            android:text="READ" />
    </LinearLayout>
    <TextView android:id="@+id/response"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" android:padding="5dp"
        android:text=""
        android:textAppearance="?android:attr/textAppearanceMedium" />
</LinearLayout>

```

3. Lalu buka manifest nya lalu ubah jadi seperti ini :

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.tugas6">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"

```

```

        android:theme="@style/AppTheme">
        <activity android:name=".ActivityEksternal">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
            />
            </intent-filter>
        </activity>
    </application>
    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
    <uses-permission
android:name="android.permission.READ_EXTERNAL_STORAGE"/>

</manifest>

```

4. Lalu run project nya jadi seperti ini :

