



Menuju Masyarakat Informasi Indonesia







### JUNIOR MOBILE PROGRAMMER

# Proyek Aplikasi Data Persistence Pada **Mobile**







### **PROYEK**

# Buat aplikasi

- 1. Aplikasi catatan harian.
- 2. Aplikasi validasi login.







### **APLIKASI CATATAN HARIAN**



Gambar 1. Tampilan Splashscreen



Gambar 2. Tampilan Halaman Utama



Gambar 3. Tampilan Halaman Tambah Catatan



Gambar 4. Tampilan Konfirmasi Hapus Catatan

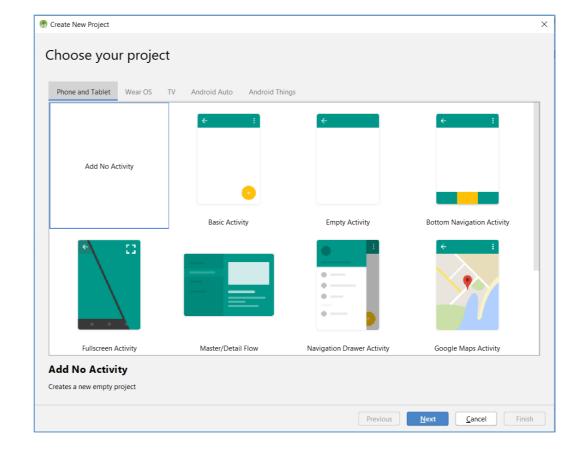






## **APLIKASI CATATAN HARIAN-Membuat Proyek Baru**

1. Buatlah sebuah proyek baru pada android studio, dan berikan nama pada proyek yang akan anda buat (sebagai contoh Proyek1).



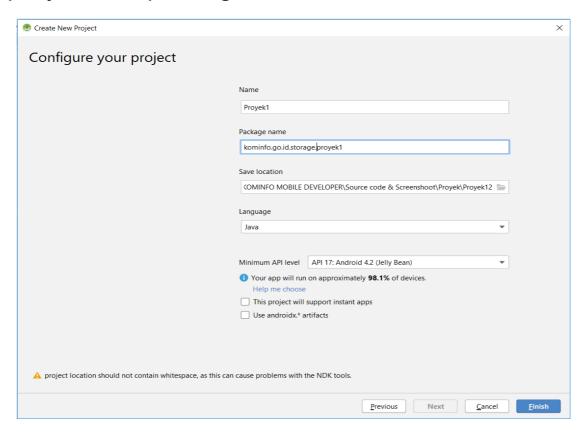






# **APLIKASI CATATAN HARIAN-Membuat Proyek Baru**

#### Tuliskan nama proyek dan package









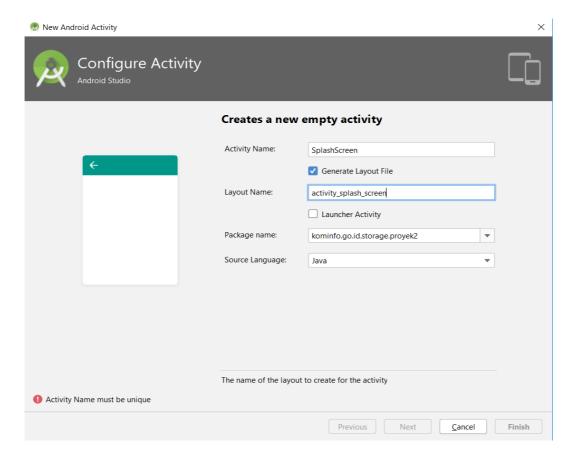
2. Buatlah sebuah *Activity*, beri nama kelas SplashScreen.java beserta file layout dengan nama activity splash screen.xml







### Tambahkan Activity SplashScreen









3. Desainlah sebuah tampilan pada activity\_splash\_screen



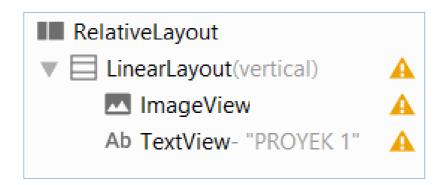
Desain Tampilan SplashScreen







### Struktur Layout Komponennya









4. Sesuaikan kode xml pada activity\_splash\_s creen.xml

```
encoding="utf-8"?>
<?xml version="1.0"
<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=".SplashScreen">
    <LinearLayout
        android:layout width="match parent"
        android:layout height="wrap content"
        android:layout centerInParent="true"
        android:orientation="vertical">
        <ImageView
            android:layout width="match parent"
            android: layout height="wrap content"
            android:adjustViewBounds="true"
            android:fitsSystemWindows="true"
            android:src="@drawable/logo" />
        <TextView
            android:layout width="wrap content"
            android:layout height="wrap content"
            android:layout gravity="center horizontal"
            android:text="PROYEK 1"
            android:textColor="#000"
            android:textSize="30sp" />
    </LinearLayout>
</RelativeLayout>
```







5. Pada kelas Java

SplashScreen.java,
tambahkan kode

```
package kominfo.go.id.storage.proyekl;
import android.content.Intent;
import android.os.Handler;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
public class SplashScreen extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState)
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity splash screen);
        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
                Intent intent = new Intent (SplashScreen.this,
MainActivity.class):
                startActivity(intent);
                finish():
        1. 3000):
```

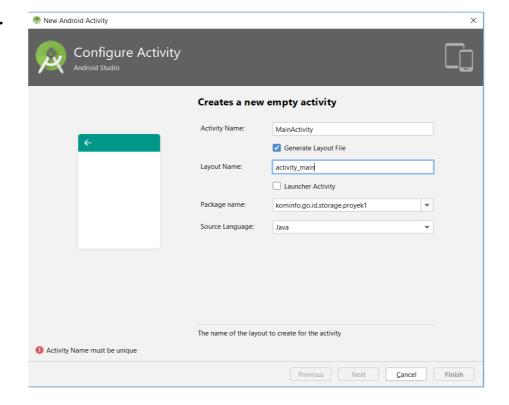






6. Buatlah sebuah Activity, beri nama kelas MainActivity. java beserta file layout dengan

nama activity\_main.xml



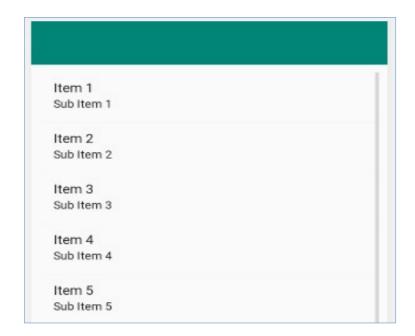
Tambahkan MainActivity dan Layout activity\_main







7. Desainlah sebuah tampilan View pada activity\_main sebagaimana berikut:



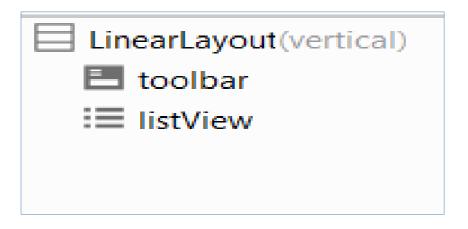
Desain Tampilan pada activity\_main







Struktur Layout pada activity\_main









8. Sesuaikan kode xml pada activity main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout height="match parent"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <android.support.v7.widget.Toolbar</pre>
        android:id="0+id/toolbar"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:background="?attr/colorPrimary"
        android:minHeight="?attr/actionBarSize"
        android:theme="?attr/actionBarTheme" />
    <ListView
        android:id="0+id/listView"
        android:layout width="match parent"
        android:layout height="match parent"
        android:padding="10dp"/>
</LinearLayout>
```







9. Pada kelas Java MainActivity.java, tambahkan kode

```
package kominfo.go.id.storage.proyekl;
import android.Manifest;
import android.content.DialogInterface;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Build;
import android.os.Environment;
import android.support.annotation.MonNull;
import android.support.v4.app.ActivityCompat;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity:
import android.os.Bundle:
import android.support.v7.widget.Toolbar;
import android.util.Log:
import android.view.Menu;
import android.view.MenuItem:
import android.view.View;
import android.widget.AdapterView;
import android.widget.ListView;
import android.widget.SimpleAdapter;
import android.widget.Toast;
import java.io.File:
import java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date:
import java.util.HashMap:
import java.util.Map;
public class MainActivity extends AppCompatActivity (
```

```
public class MainActivity extends AppCompatActivity (
    public static final int REQUEST CODE STORAGE - 100;
    ListView listView:
    90verride
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity main);
        Toolbar toolbar = findViewBvId(R.id.toolbar):
        setSupportActionBar(toolbar);
        getSupportActionBar().setTitle("Aplikasi Catatan Proyek 1");
        listView - findViewBvId(R.id.ListView):
        listView.setOnItenClickListener(new
AdapterView.OnItemClickListener() (
            @Override
            public void onItemClick(AdapterView<?> parent, View view,
int position, long id)
                Intent intent - new Intent (MainActivity.this,
InsertAndViewActivity.class);
                Map<String, Object> data = (Map<String, Object>)
parent.getAdapter().getItem(position);
                intent.putExtra("filename",
data.get("name").toString());
```







9. Pada kelas Java MainActivity.java, tambahkan kode

```
Toast.makeText (MainActivity.this, "You clicked " +
data.get("name"), Toast.LENGTH SHORT).show();
               startActivity(intent);
       11:
       listView.setOnItemLongClickListener(new
AdapterView.OnItemLongClickListener() {
           public boolean onItemLongClick(AdapterView<?> parent, View
view, int position, long id)
               Map<String, Object> data = (Map<String, Object>)
parent.getAdapter().getItem(position);
tampilkanDialogKonfirmasiHapusCatatan(data.get("name").toString());
       11:
   protected void onResume() {
       super.onResume();
       if (Build. VERSION. SDK_INT >= 23) {
           if (periksalzinPenyimpanan())
               mengambillistFilePadaFolder();
       | else |
           mengambilListFilePadaFolder();
```

```
public boolean periksalzinPenyimpanan()
        if (Build. VERSION. FOR IMT >- 23)
(checkSelfPermission(android.Manifest.permission.WRITE EXTERNAL STORAGE
                    == PackageManager.PERMISSION GRANTED)
                return true:
                ActivityCompat.requestPermissions(this, new
String[] [Manifest.permission.WRITE EXTERNAL STORAGE],
REQUEST CODE STORAGE) ;
                return false:
         alsa
            return true:
    public void onRequestPermissionsResult(int requestCode, @NonNull
String[] permissions, @NonNull int[] grantResults) {
        super.onRequestPermissionsResult(requestCode, permissions,
```







9. Pada kelas Java MainActivity.java, tambahkan kode berikut ini:

```
grantResults);
        switch (requestCode) {
            case REQUEST CODE STORAGE:
                if (grantResults[0] --
PackageManager.PERMISSION GRANTED)
                    mengambilListFilePadaFolder();
                break:
    woid mengambilListFilePadaFolder() 4
       String path -
Environment.getExternalStorageDirectory().toString() 4
"/kominfo.proyek1";
        File directory = new File (path);
        if (directory.exists()) {
            File[] files = directory.listFiles();
            String[] filenames = new String[files.length];
            String[] dateCreated = new String[files.length];
            SimpleDateFormat simpleDateFormat = new
SimpleDateFormat("dd NMM YYYY HH:mm:ma");
            ArrayList (Map(String, Object)) itemDataList = new
ArrayList (Map (String, Object>> ();
```

```
for (int i = 0; i < files.length; i++) {
               filenames[i] = files[i].getName();
               Date lastModDate = new Date(files[i].lastModified());
               dateCreated[i] = simpleDateFormat.format(lastModDate);
               Map (String, Object> listItenMap = new HashMap ();
               listItemMap.put("name", filenames[i]);
               listItemMap.put("date", dateCreated(i));
               itemDataList.add(listItemMap);
           SimpleAdapter simpleAdapter - new SimpleAdapter(this,
itemDataList, android.R.layout.simple list item 2,
                    new String[] {"name", "date"}, new
int[] (android.R.id.text1, android.R.id.text2));
           listView.setAdapter(simpleAdapter);
           simpleAdapter.notifyDataSetChanged();
   public boolean onCreateOptionsMenu(Menu menu)
       getMenuInflater().inflate(R.menu.menu, menu);
       return true;
   public boolean onOptionsItenSelected (MenuItem item) {
       switch (item.getItemId()) (
           case R.id.action tambah:
               Intent intent - new Intent (this.
```







9. Pada kelas Java MainActivity.java, tambahkan kode berikut:

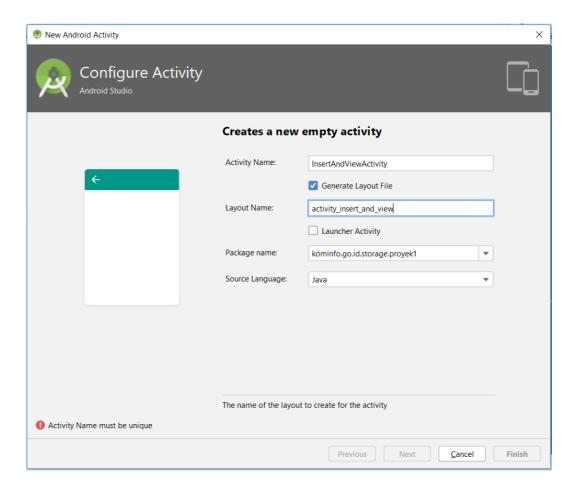
```
InsertAndViewActivity.class);
                startActivity(intent);
        return super.onOptionsItemSelected(item);
   void tampilkanDislogKonfirmasiHapusCatatan(final String filename) {
        new AlertDialog.Builder(this)
                .setTitle("Hapus Catatan ini?")
                .setNessage ("Apakah Anda yakin ingin menghapus Catatan
"+filename+"?")
                .setIcon(android.R.drawable.ic dialog alert)
                .setPositiveButton(android.R.string.yes, new
DialogInterface.OnClickListener() (
                    public woid onClick(DislogInterface dislog, int
whichDutton) (
                        hapusFile(filename);
                .setNegativeButton(android.R.string.mo, null).show();
   woid hapusPile (String filename) {
Environment.getExternalStorageDirectory().toString() +
"/kominfo.proyek1";
        File file - new File(path, filename);
        if (file.exists()) (
            file.delete();
        mengambilListFilePadaFolder();
```







1. Tambahkan *Activity* baru, berikan nama *Activity* dengan InsertAndViewActivity, serta nama layout activity\_insert\_and\_view.



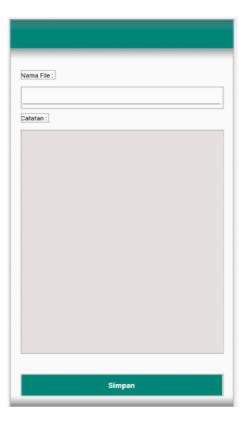
. Tambahkan InsertAndViewActivity

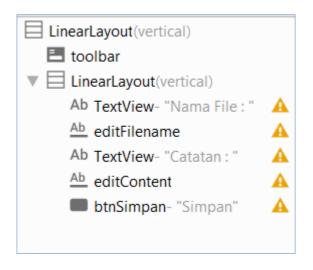






2. Buatlah sebuah desain layout, dengan tampilan sebagaimana berikut .





Struktur Layout InsertAndViewActivity

Desain Tampilan InsertAndViewActivity







3. Sesuaikan kode xml pada layout activity\_insert\_and\_view sebagaimana kode berikut :

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout</pre>
xnlns: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:orientation="vertical"
    tools:context=".InsertAndViewActivity">
        <android.support.v7.widget.Toolbar</pre>
            android:id="8+id/toolbar"
            android:layout width="match parent"
            android: layout height="wrap content"
            android:background="?attr/colorPrimary"
            android:minHeight="?attr/actionBarSize"
            android:theme="?attr/actionBarTheme" />
    <LinearLayout</pre>
        android:layout width="match parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="20dp">
        <TextView
            android:layout width="wrap content"
            android: layout height="wrap content"
            android:layout marginBottom="5dp"
            android:text="Nama File : "
            android:layout marginTop="20dp"
            android:textColor="#000"
            android:textSize="12sp" />
            android:id="9+id/editFilename"
            android:layout width="match parent"
            android:layout height="40dp"
            android:layout_marginTop="10dp"
            android:padding="5dp"
            android:singleLine="true"
            android:textSize="14sp" />
```







3. Sesuaikan kode xml pada layout activity\_insert\_and\_view sebagaimana kode berikut :

```
android:layout width="wrap content"
           android: layout height="wrap content"
           android:layout marginTop="10dp"
           android:layout marginBottom="5dp"
           android:text="Catatan : "
           android:textColor="#0000"
           android:textSize="12sp" />
       <EditText
           android:id="@+id/editContent"
           android: layout width="match parent"
           android: layout height="match parent"
           android:layout marginTop="10dp"
           android: layout weight="1"
           android:gravity="top|left"
           android:background="#E6DFDF"
           android:singleLine="false"
           android:padding="5dp"
           android:textColor="#0000"
           android:textSize="14sp" />
           android:id="@+id/btnSimpan"
           android: layout width="match parent"
           android:layout height="40dp"
           android:layout marginTop="40dp"
           android:background="@color/colorPrimary"
           android:text="Simpan"
           android:textAllCaps="false"
           android:textColor="#FFF"
           android:textSize="14sp"
           android:textStyle="bold" />
   </LinearLayout>
```







```
package kominfo.go.id.storage.proyekl;
import android.Manifest;
import android.content.DialogInterface;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Build;
import android.os.Environment;
import android.support.annotation.NonNull;
import android.support.v4.app.ActivityCompat;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.Toolbar;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileOutputStream;
import java.io.FileReader;
import java.io.IOException;
import java.io.OutputStreamWriter;
```

```
public class InsertAndViewActivity extends AppCompatActivity implements
View.OnClickListener
    public static final int REQUEST CODE STORAGE = 100;
    int eventID = 0;
    EditText edtFileName, edtContent;
    Button btnSimpan;
    boolean isEditable = false;
    String fileName = "";
    String tempCatatan = "";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity insert and view);
        Toolbar toolbar = findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);
        getSupportActionBar().setDisplayShowHomeEnabled(true);
        edtFileName = findViewById(R.id.editFilename);
        edtContent = findViewById(R.id.editContent);
        btnSimpan = findViewById(R.id.btnSimpan);
        btnSimpan.setOnClickListener(this);
        Bundle extras = getIntent().getExtras();
        if (extras != null)
```







```
fileName = extras.getString("filename");
            edtFileName.setText(fileName);
            getSupportActionBar().setTitle("Ubah Catatan");
            getSupportActionBar().setTitle("Tambah Catatan");
       eventID = 1;
       if (Build.VERSION.SDK INT >= 23) {
            if (periksalzinPenyimpanan()) {
                bacaFile();
        } else {
            bacaFile();
    @Override
   public void onClick(View v) {
        switch (v.getId()) {
            case R.id.btnSimpan:
                eventID = 2;
(!tempCatatan.equals(edtContent.getText().toString())) {
                    if (Build. VERSION. SDK INT >= 23) {
                        if (periksaIzinPenyimpanan()) {
                            tampilkanDialogKonfirmasiPenyimpanan();
                    } else {
                        tampilkanDialogKonfirmasiPenyimpanan();
                break:
```







```
public void onRequestPermissionsResult(int requestCode, @NonNull
String[] permissions, @NonNull int[] grantResults) {
        super.onRequestPermissionsResult(requestCode, permissions,
grantResults);
        switch (requestCode) {
            case REQUEST CODE STORAGE:
                if (grantResults[0] ==
PackageManager.PERMISSION GRANTED)
                    if (eventID == 1) {
                        bacaFile();
                    } else {
                        tampilkanDialogKonfirmasiPenyimpanan();
                break:
    void bacaFile() {
        String path =
Environment.getExternalStorageDirectory().toString() +
"/kominfo.proyek1";
        File file = new File(path, edtFileName.getText().toString());
        if (file.exists()) {
            StringBuilder text = new StringBuilder();
            try {
                BufferedReader br = new BufferedReader(new
FileReader(file));
                String line = br.readLine();
```

```
while (line != null) {
                    text.append(line);
                    line = br.readLine();
                br.close();
            } catch (IOException e) {
                System.out.println("Error " + e.getMessage());
            tempCatatan = text.toString();
            edtContent.setText(text.toString());
    void buatDanUbah() {
        String state = Environment.getExternalStorageState();
        if (!Environment.MEDIA MOUNTED.equals(state)) {
            return;
        String path =
Environment.getExternalStorageDirectory().toString() +
"/kominfo.proyek1";
        File parent = new File(path);
        if (parent.exists()) {
            File file = new File(path,
```







```
edtFileName.getText().toString());
            FileOutputStream outputStream = null;
            try -
                file.createNewFile();
                outputStream = new FileOutputStream(file);
                OutputStreamWriter streamWriter = new
OutputStreamWriter(outputStream);
                streamWriter.append(edtContent.getText());
                streamWriter.flush();
                streamWriter.close();
                outputStream.flush();
                outputStream.close();
            } catch (Exception e) {
                e.printStackTrace();
        } else {
            parent.mkdir();
            File file = new File(path,
edtFileName.getText().toString());
            FileOutputStream outputStream = null;
                file.createNewFile();
                outputStream = new FileOutputStream(file, false);
outputStream.write(edtContent.getText().toString().getBytes());
                outputStream.flush();
                outputStream.close();
            } catch (Exception e) {
                e.printStackTrace();
```

```
onBackPressed();
   void tampilkanDialogKonfirmasiPenyimpanan() {
       new AlertDialog.Builder(this)
                .setTitle("Simpan Catatan")
                .setMessage("Apakah Anda yakin ingin menyimpan Catatan
ini?")
                .setIcon(android.R.drawable.ic dialog alert)
                .setPositiveButton(android.R.string.yes, new
DialogInterface.OnClickListener() {
                   public void onClick(DialogInterface dialog, int
whichButton)
                        buatDanUbah();
                .setNegativeButton(android.R.string.no, null).show();
    @Override
    public void onBackPressed()
        if (!tempCatatan.equals(edtContent.getText().toString())) {
            tampilkanDialogKonfirmasiPenyimpanan();
```







```
super.onBackPressed();

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    if (item.getItemId() == android.R.id.home) {
        onBackPressed();
    }
    return super.onOptionsItemSelected(item);
}
```







1. Jalankan aplikasi tersebut, lalu ujilah fungsionalitasnya baik untuk fungsi tambah, ubah, hapus, dan baca data.

#### Tampilan Awal Aplikasi Catatan Harian



#### Tampilan Form Tambah Catatan

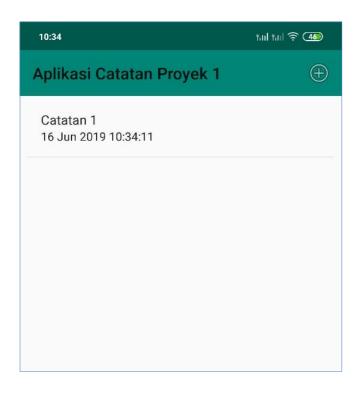
10:35	શના શના 🦐 (46)
← Tambah Catatan	
Nama File :	
Catatan :	







2. Jalankan aplikasi tersebut, lalu ujilah fungsionalitasnya baik untuk fungsi tambah, ubah, hapus, dan baca data.





. Tampilan Saat Catatan telah disimpan

Tampilan Form Ubah Catatan

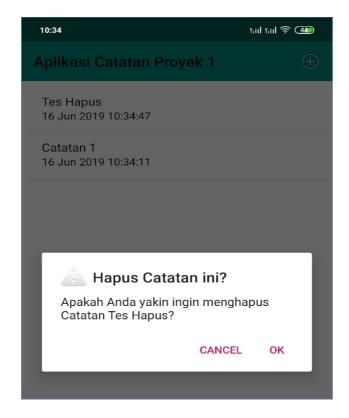






3. Jalankan aplikasi tersebut, lalu ujilah fungsionalitasnya baik untuk fungsi tambah, ubah, hapus, dan baca data.

Tampilan saat Hapus Catatan (ada konfirmasi hapus)

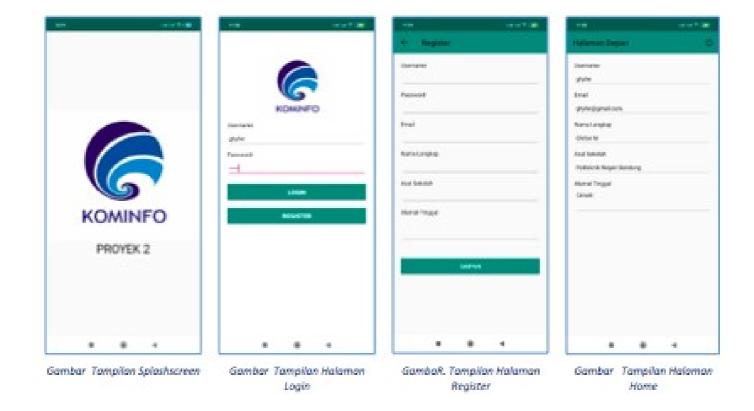








- penyimpanan file (data persistence) menggunakan internal storage.
- perhatikan beberapa tampilan berikut ini :









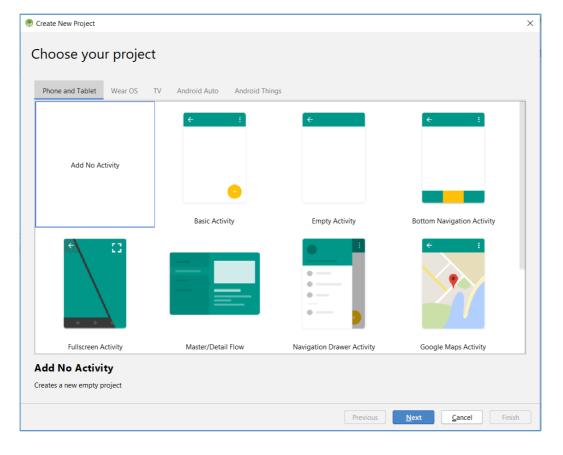
- melakukan pengecekan terhadap data user yang tersimpan pada file teks.
- Pertama kali aplikasi dijalankan akan muncul splahscreen,
- apabila user belum teregistrasi, maka dapat melakukan registrasi pada halaman registrasi,
- apabila sudah memiliki akun dapat login menggunakan akun tersebut pada halaman login.
- Setelah berhasil login, aplikasi akan masuk ke halaman utama yang memunculkan data user.
- Tersedia juga tombol logout untuk keluar dari aplikasi.







1. Buatlah sebuah proyek baru pada android studio, dan berikan nama pada proyek yang akan anda buat (sebagai contoh Proyek2).



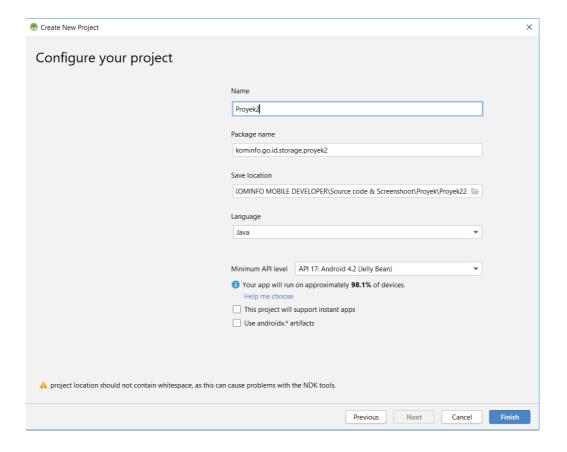
Tambahkan Proyek Baru (Add No Activity)







## Tuliskan nama proyek dan package



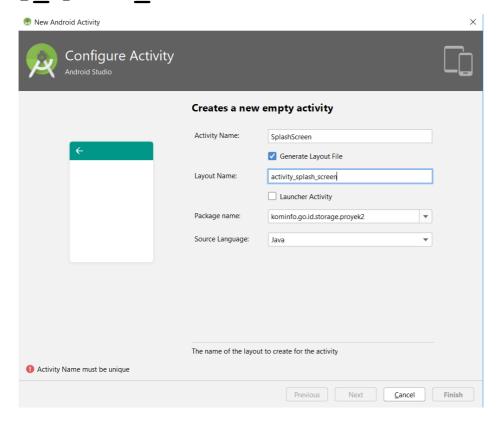






### APLIKASI VALIDASI LOGIN - Membuat Halaman Splashscreen

2. Buatlah sebuah *Activity*, beri nama kelas **SplashScreen.java** beserta file layout dengan nama activity\_splash\_screen.xml



Tambahkan Activity SplashScreen







3. Desainlah sebuah tampilan pada activity\_splash\_screen sebagaimana berikut ini :

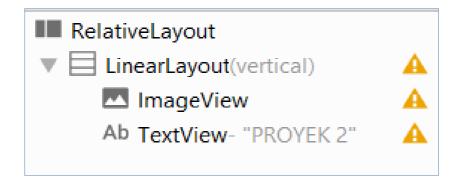


Desain Tampilan SplashScreen









Struktur Layout Komponennya







Sesuaikan kode xml pada activity\_splash\_screen.xml sebagaimana berikut :

```
<?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=".SplashScreen">
    <LinearLayout
        android:layout width="match parent"
        android:layout height="wrap content"
        android:layout centerInParent="true"
        android:orientation="vertical">
        <ImageView</pre>
            android:layout width="match parent"
            android: layout height="wrap content"
            android:adjustViewBounds="true"
            android:fitsSystemWindows="true"
            android:src="@drawable/logo" />
        <TextView
            android:layout width="wrap content"
            android:layout height="wrap content"
            android:layout gravity="center horizontal"
            android:text="PROYEK 2"
            android:textColor="#000"
            android:textSize="30sp" />
   </LinearLayout>
</RelativeLayout>
```







5. Pada kelas Java SplashScreen.java, tambahkan kode berikut ini :

```
package kominfo.go.id.storage.proyek2;
import android.content.Intent;
import android.os.Handler;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.IOException;
public class SplashScreen extends AppCompatActivity (
   public static final String FILENAME = "login";
    00verride
   protected void onCreate (Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity splash screen);
        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
```







5. Pada kelas Java SplashScreen.java, tambahkan kode berikut ini :

```
if (isLogin()) (
                    Intent intent = new Intent(SplashScreen.this,
MainActivity.class);
                    startActivity(intent);
                | else (
                    Intent intent = new Intent (SplashScreen.this,
LoginActivity.class);
                    startActivity(intent);
                finish();
        ), 3000);
    boolean isLogin() {
        File sdcard = getFilesDir();
        File file = new File(sdcard, FILENAME);
        if (file.exists()) {
            return true;
            return false;
```

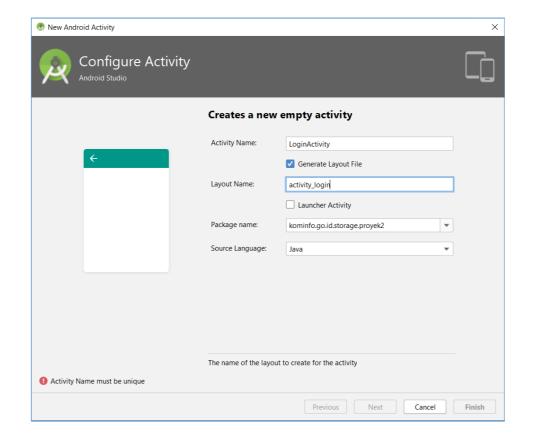






1. Buatlah sebuah Activity, beri nama kelas LoginActivity.java beserta file layout dengan nama

activity\_login.xml.



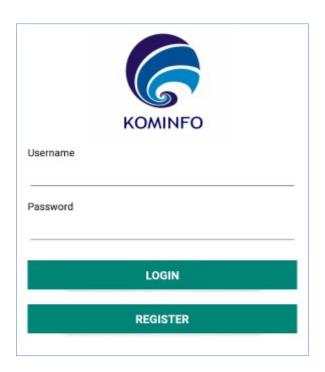
Tambahkan LoginActivity dan Layout activity\_login



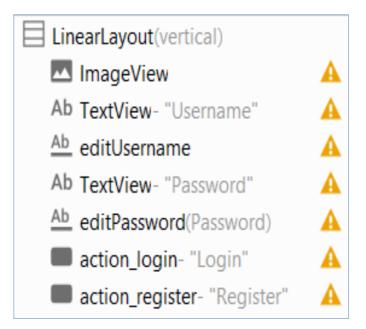




2. Desainlah sebuah tampilan pada activity\_login sebagaimana berikut :



Desain Tampilan pada activity\_login



Struktur Layout pada activity\_main







3. Sesuaikan kode xml pada activity\_login.xml sebagaimana berikut:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
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:background="#FFF"
    android:orientation="vertical"
   android:padding="20dp"
    tools:context=".LoginActivity">
    <ImageView</pre>
        android:layout width="200dp"
        android:layout height="wrap content"
        android: layout gravity="center horizontal"
        android:layout marginTop="40dp"
        android:adjustViewBounds="true"
        android:fitsSystemWindows="true"
        android:src="@drawable/logo" />
   <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Username"
        android:textColor="#000"
        android:textSize="14sp" />
   <EditText
        android:id="@+id/editUsername"
        android:layout width="match parent"
        android:layout_height="40dp"
        android:layout marginTop="5dp"
```







```
android:digits="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopgrstuvwxyz123
4567890"
        android:inputType="textFilter"
        android:textColor="#000"
        android:textSize="14sp" />
    <TextView
        android:layout_width="wrap_content"
        android: layout height="wrap content"
        android:layout marginTop="10dp"
        android:text="Password"
        android:textColor="#000"
        android:textSize="14sp" />
    <EditText
        android:id="@+id/editPassword"
        android:layout_width="match_parent"
        android:layout height="40dp"
        android:layout marginTop="5dp"
        android:inputType="textPassword"
        android:textColor="#000"
        android:textSize="14sp" />
```







```
<Button
        android:id="0+id/action login"
        android:layout width="match parent"
        android:layout height="40dp"
        android:layout marginTop="20dp"
        android:background="@color/colorPrimary"
        android:text="Login"
        android:textColor="#FFF"
        android:textSize="16sp"
        android:textStyle="bold"
        1>
    <Button
        android:id="@+id/action register"
        android:layout width="match parent"
        android:layout height="40dp"
        android:layout marginTop="20dp"
        android:background="@color/colorPrimary"
        android:text="Register"
        android:textColor="#FFF"
        android:textSize="16sp"
        android:textStyle="bold"
</LinearLayout>
```







4. Pada kelas Java LoginActivity.java, tambahkan kode berikut ini :

```
package kominfo.go.id.storage.proyek2;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
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.File;
import java.io.FileOutputStream;
import java.io.FileReader;
import java.io.IOException;
public class LoginActivity extends AppCompatActivity {
    public static final String FILENAME = "login";
    EditText editUsername, editPassword;
    Button btnLogin, btnRegister;
    00verride
    protected void onCreate (Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity login);
        editUsername = findViewById(R.id.editUsername);
        editPassword = findViewById(R.id.editPassword);
        btnLogin = findViewById(R.id.action_login);
        btnRegister = findViewById(R.id.action register);
```







```
btnLogin.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                login();
        1);
        btnRegister.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent (LoginActivity.this,
RegisterActivity.class);
                startActivity(intent);
       });
    void simpanFileLogin() {
        String isiFile = editUsername.getText().toString() + ";" +
editPassword.getText().toString();
        File file = new File(getFilesDir(), FILENAME);
        FileOutputStream outputStream = null;
            file.createNewFile();
            outputStream = new FileOutputStream(file, false);
            outputStream.write(isiFile.getBytes());
            outputStream.flush();
            outputStream.close();
        } catch (Exception e) {
            e.printStackTrace();
        Toast.makeText(this, "Login Berhasil",
Toast. LENGTH SHORT) . show();
        onBackPressed();
```







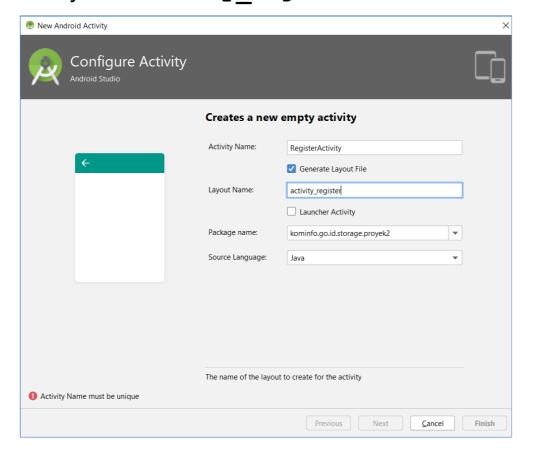
```
void login()
        File sdcard = getFilesDir();
        File file = new File(sdcard,
editUsername.getText().toString());
        if (file.exists()) {
            StringBuilder text = new StringBuilder();
            try {
                BufferedReader br =
                        new BufferedReader(new FileReader(file));
                String line = br.readLine();
                while (line != null) {
                    text.append(line);
                    line = br.readLine();
                br.close();
            } catch (IOException e) {
                System.out.println("Error " + e.getMessage());
            String data = text.toString();
            String[] dataUser = data.split(";");
            if (dataUser[1].equals(editPassword.getText().toString()))
                simpanFileLogin();
                Intent intent = new Intent(this, MainActivity.class);
                startActivity(intent);
                finish();
                Toast.makeText(this, "Password Tidak Sesuai",
Toast. LENGTH SHORT) . show();
            Toast.makeText(this, "User Tidak Ditemukan",
Toast.LENGTH SHORT).show();
```







1. Selanjutnya, tambahkan *Activity* baru, berikan nama *Activity* dengan RegisterActivity, serta nama layout activity\_register.



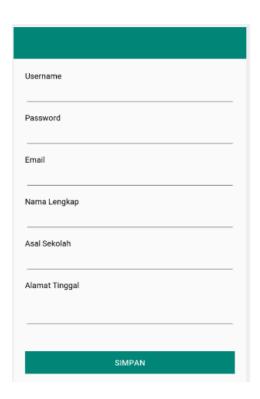
Tambahkan RegisterActivity



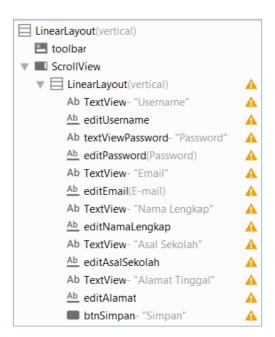




2. Buatlah sebuah desain layout, dengan tampilan sebagaimana berikut :



Desain Tampilan RegisterActivity



. Struktur Layout RegisterActivity







```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout width="match parent"
    android:layout height="match parent"
    android:orientation="vertical"
    tools:context=".RegisterActivity">
    <android.support.v7.widget.Toolbar</pre>
        android:id="@+id/toolbar"
        android:layout width="match parent"
        android:layout height="wrap content"
        android:background="?attr/colorPrimary"
        android:minHeight="?attr/actionBarSize"
        android:theme="?attr/actionBarTheme" />
    <ScrollView
        android:layout width="match parent"
        android:layout height="match parent">
        <LinearLayout
            android:layout width="match parent"
            android:layout height="match parent"
            android:orientation="vertical"
            android:padding="20dp">
            <TextView
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:text="Username"
                android:textColor="#000"
                android:textSize="14sp" />
```







```
<EditText
    android:id="0+id/editUsername"
   android:layout width="match parent"
   android:layout height="40dp"
   android:layout marginTop="5dp"
   android:digits="abcdefghijklmnopqrstuvwxyz1234567890"
   android:inputType="textFilter"
   android:textColor="#000"
   android:textSize="14sp" />
<TextView
    android:id="@+id/textViewPassword"
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:layout marginTop="10dp"
    android:text="Password"
    android:textColor="#000"
   android:textSize="14sp" />
<EditText
    android:id="0+id/editPassword"
   android:layout width="match parent"
```







```
android:layout height="40dp"
    android:layout marginTop="5dp"
    android:inputType="textPassword"
    android:textColor="#000"
    android:textSize="14sp" />
<TextView
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginTop="10dp"
    android:text="Email"
    android:textColor="#000"
    android:textSize="14sp" />
<EditText
    android:id="@+id/editEmail"
    android:layout width="match parent"
    android:layout height="40dp"
    android:layout marginTop="5dp"
    android:inputType="textEmailAddress"
    android:textColor="#000"
    android:textSize="14sp" />
<TextView
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout marginTop="10dp"
    android:text="Nama Lengkap"
    android:textColor="#000"
    android:textSize="14sp" />
```







```
<EditText
   android:id="@+id/editNamaLengkap"
   android:layout width="match parent"
   android:layout height="40dp"
   android:layout marginTop="5dp"
   android:textColor="#000"
   android:textSize="14sp" />
<TextView
   android:layout width="wrap content"
   android:layout height="wrap content"
   android:layout marginTop="10dp"
    android:text="Asal Sekolah"
   android:textColor="#000"
   android:textSize="14sp" />
<EditText
    android:id="0+id/editAsalSekolah"
   android:layout width="match parent"
   android:layout height="40dp"
   android:layout marginTop="5dp"
   android:textColor="#000"
   android:textSize="14sp" />
<TextView
   android:layout width="wrap content"
```







```
android:layout height="wrap content'
                android:layout marginTop="10dp"
                android:text="Alamat Tinggal"
                android:textColor="#000"
                android:textSize="14sp" />
           <EditText
                android:id="0+id/editAlamat"
                android:layout width="match parent"
                android:layout height="wrap content"
                android:layout marginTop="5dp"
                android:gravity="top|left"
                android:lines="3"
                android:padding="5dp"
                android:singleLine="false"
                android:textColor="#000"
                android:textSize="14sp" />
           <Button
                android:id="@+id/btnSimpan"
                android:layout width="match parent"
                android:layout height="40dp"
                android:layout marginTop="40dp"
                android:background="@color/colorPrimary"
                android:text="Simpan"
                android:textColor="#FFF"
                android:textSize="14sp" />
       </LinearLayout>
   </ScrollView>
</LinearLayout>
```







4. Pada kelas Java RegisterActivity.java, tambahkan kode berikut ini:

```
package kominfo.go.id.storage.proyek2;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import java.io.File;
import java.io.FileOutputStream;
public class RegisterActivity extends AppCompatActivity {
    EditText editUsername, editPassword, editEmail, editNamaLengkap,
editAsalSekolah, editAlamat;
    Button btnSimpan;
    @Override
    protected void onCreate(Bundle savedInstanceState)
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity register);
        Toolbar toolbar = findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);
        getSupportActionBar().setDisplayShowHomeEnabled(true);
        getSupportActionBar().setTitle("Register");
```







4. Pada kelas Java RegisterActivity.java, tambahkan kode berikut ini:

```
editUsername = findViewById(R.id.editUsername);
        editPassword = findViewById(R.id.editPassword);
        editEmail = findViewById(R.id.editEmail);
        editNamaLengkap = findViewById(R.id.editNamaLengkap);
        editAsalSekolah = findViewById(R.id.editAsalSekolah);
        editAlamat = findViewById(R.id.editAlamat);
        btnSimpan = findViewById(R.id.btnSimpan);
        btnSimpan.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (isValidation()) {
                    simpanFileData();
                    Toast.makeText(RegisterActivity.this, "Mohon
Lengkapi Seluruh Data", Toast. LENGTH SHORT) . show();
        1);
    boolean isValidation()
        if (editUsername.getText().toString().equals("")
```







4. Pada kelas Java RegisterActivity.java, tambahkan kode berikut ini:

```
editPassword.getText().toString().equals("") ||
editEmail.getText().toString().eguals("") ||
editNamaLengkap.getText().toString().equals("") ||
editAsalSekolah.getText().toString().equals("") ||
editAlamat.getText().toString().equals("")) {
            return false;
        } else {
            return true;
   void simpanFileData()
        String isiFile = editUsername.getText().toString() + ";" +
editPassword.getText().toString() + ";" +
editEmail.getText().toString() + ";" +
editNamaLengkap.getText().toString() + ";" +
editAsalSekolah.getText().toString() + ";" +
editAlamat.getText().toString();
        File file = new File(getFilesDir(),
editUsername.getText().toString());
        FileOutputStream outputStream = null;
            file.createNewFile();
            outputStream = new FileOutputStream(file, false);
            outputStream.write(isiFile.getBytes());
            outputStream.flush();
            outputStream.close();
        } catch (Exception e) {
            e.printStackTrace();
        Toast.makeText(this, "Register Berhasil",
Toast.LENGTH SHORT) .show();
        onBackPressed();
```







```
package kominfo.go.id.storage.proyek2;
import android.content.DialogInterface;
import android.content.Intent;
import android.support.v7.app.AlertDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.IOException;
public class MainActivity extends AppCompatActivity
    EditText editUsername, editPassword, editEmail, editNamaLengkap,
editAsalSekolah, editAlamat;
   Button btnSimpan;
    TextView textViewPassword:
   public static final String FILENAME = "login";
```







```
@Override
protected void onCreate(Bundle savedInstanceState) +
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity register);
    Toolbar toolbar = findViewById(R.id.toolbar);
    setSupportActionBar(toolbar);
    getSupportActionBar().setTitle("Halaman Depan");
    editUsername = findViewById(R.id.editUsername);
    textViewPassword = findViewById(R.id.textViewPassword);
    editPassword = findViewById(R.id.editPassword);
    editEmail = findViewById(R.id.editEmail);
    editNamaLengkap = findViewById(R.id.editNamaLengkap);
    editAsalSekolah = findViewById(R.id.editAsalSekolah);
    editAlamat = findViewBvId(R.id.editAlamat);
    btnSimpan = findViewById(R.id.btnSimpan);
    btnSimpan.setVisibility(View.GONE);
    editUsername.setEnabled(false);
    editPassword.setVisibility(View.GONE);
    textViewPassword.setVisibility(View.GONE);
    editEmail.setEnabled(false);
    editNamaLengkap.setEnabled(false);
    editAsalSekolah.setEnabled(false);
```







```
editAlamat.setEnabled(false);
    bacaFileLogin();
void bacaFileLogin()
   File sdcard = getFilesDir();
   File file = new File(sdcard, FILENAME);
   if (file.exists()) {
        StringBuilder text = new StringBuilder();
        try
            BufferedReader br =
                    new BufferedReader(new FileReader(file));
            String line = br.readLine();
            while (line != null) {
                text.append(line);
                line = br.readLine();
            br.close();
        } catch (IOException e)
            System.out.println("Error " + e.getMessage());
        String data = text.toString();
        String[] dataUser = data.split(";");
       bacaDataUser(dataUser[0]);
```







```
void bacaDataUser(String fileName) {
   File sdcard = getFilesDir();
    File file = new File(sdcard, fileName);
   if (file.exists()) {
        StringBuilder text = new StringBuilder();
            BufferedReader br =
                    new BufferedReader(new FileReader(file));
            String line = br.readLine();
            while (line != null) {
                text.append(line);
                line = br.readLine();
            br.close():
        } catch (IOException e) {
            System.out.println("Error " + e.getMessage());
        String data = text.toString();
        String[] dataUser = data.split(";");
        editUsername.setText(dataUser[0]);
        editEmail.setText(dataUser(2));
        editNamaLengkap.setText(dataUser[3]);
        editAsalSekolah.setText(dataUser[4]);
        editAlamat.setText(dataUser[5]);
    } else {
        Toast.makeText(this, "User Tidak Ditemukan",
```







```
Toast. LENGTH SHORT) . show();
    @Override
   public boolean onCreateOptionsMenu (Menu menu)
        getMenuInflater().inflate(R.menu.menu, menu);
        return true;
    00verride
   public boolean onOptionsItemSelected(MenuItem item)
        switch (item.getItemId()) {
            case R.id.action logout:
                tampilkanDialogKonfirmasiLogout();
                break:
        return super.onOptionsItemSelected(item);
   void hapusFile() {
        File file = new File(getFilesDir(), FILENAME);
       if (file.exists()) {
            file.delete();
```







```
void tampilkanDialogKonfirmasiLogout() {
        new AlertDialog.Builder(this)
                .setTitle("Logout")
                .setMessage("Apakah Anda yakin ingin Logout?")
                .setIcon(android.R.drawable.ic dialog alert)
                .setPositiveButton(android.R.string.yes, new
DialogInterface.OnClickListener()
                    public void onClick(DialogInterface dialog, int
whichButton) {
                        hapusFile();
                        Intent intent = new Intent (MainActivity.this,
LoginActivity.class);
                        startActivity(intent);
                        finish();
                .setNegativeButton(android.R.string.no, null).show();
```







# APLIKASI VALIDASI LOGIN - Menguji Aplikasi Proyek 2

- 1. Jalankan aplikasi, lalu
- 2. Uji fungsionalitas registrasi, login dan logout.







#### **KESIMPULAN**

- Proyek1, anda membuat aplikasi catatan harian dimana proses penyimpanannya menggunakan *external storage*.
- Proyek2, anda membuat aplikasi validasi login, dimana data user disimpan pada *internal storage*.
- Data persistence dapat digunakan untuk menyimpan data apapun sesuai kebutuhan dalam bentuk file. Data ini bersifat tetap dan tidak akan hilang selama tidak dihapus.







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