



MM1 & MM3

Tahun Ajaran 2022/2023

PEMROGRAMAN

PERANGKAT BERGERAK

(KOTLIN)

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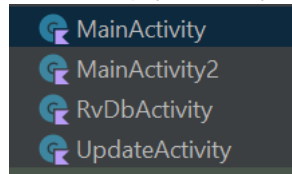
MODUL 6

CARDVIEW WITH SQLITE

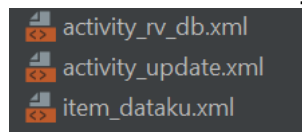
(Link Github: <https://github.com/bungagana/Cardview-SQLite-Kotlin>)

PRAKTIKUM

Buat Empty Activity :



Buat Resource File Layout :



Activity_main.xml (TAMPILAN MAIN)

```
<?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"
    tools:context=".MainActivity"
    android:orientation="vertical"
    android:padding="20dp" >

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="ISI DATA"
        android:paddingBottom="20dp"
        android:textSize="20sp"
        android:textAlignment="center"
        android:gravity="center_horizontal"
        android:layout_margin="10dp"
        android:textStyle="bold" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```

        android:id="@+id/input_email"
        android:hint="Masukan Email Kampus"
        android:textSize="16dp">
    </EditText>
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_nama"
        android:hint="Masukan Nama"
        android:textSize="16dp"/>
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_username"
        android:hint="Masukan Nim"
        android:textSize="16dp"/>
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_password"
        android:hint="Masukan Password"
        android:textSize="16dp"/>

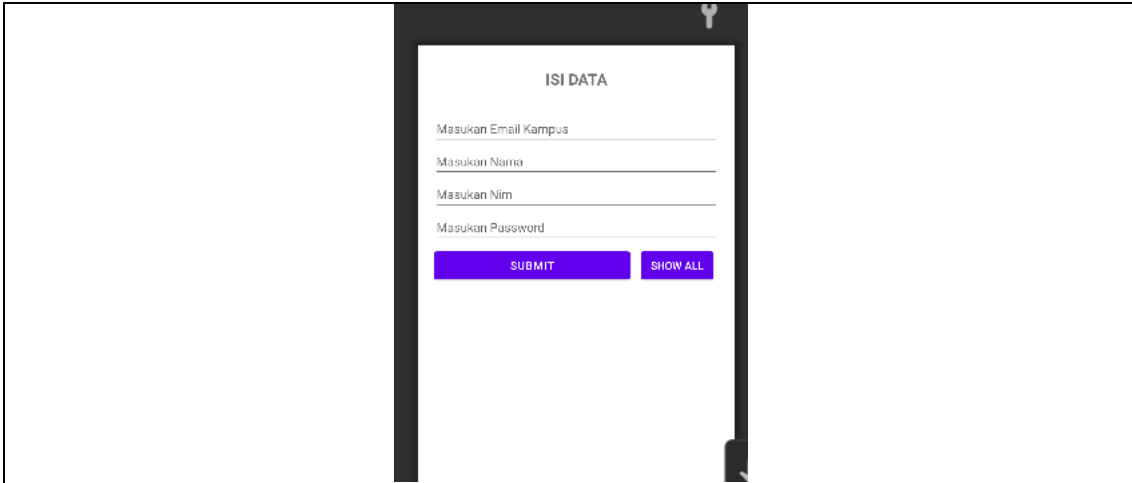
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:gravity="center">
        <Button
            android:id="@+id/btn_submit"
            android:layout_weight="1"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_marginEnd="6dp"
            android:text="Submit"
            android:onClick="addData"
            android:textColor="@color/white"/>

            <Button
                android:id="@+id/btn_show"
                style="@style/btn_Style"
                android:text="Show All"
                android:onClick="showAll"
                android:textColor="@color/white"/>

    </LinearLayout>
</LinearLayout>

```

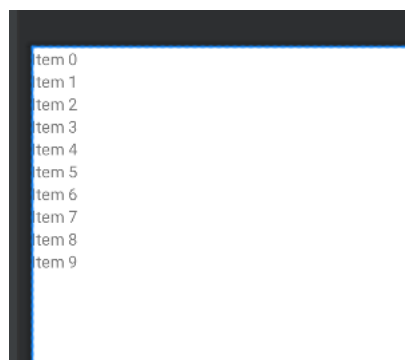
Output



Activity_Rv.xml (TAMPILAN RECYCLER VIEW)

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    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"
    tools:context=".RvDbActivity">
    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/rv_tampilkan"
        tools:ignore="MissingConstraints" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Output



Activity_update.xml

(TAMPILAN KETIKA BUTTON UPDATE DI KLIK)

```
<?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"
    tools:context=".UpdateActivity"
    android:orientation="vertical"
    android:padding="20dp">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Update Data"
        android:textSize="20sp"
        android:textAlignment="center"
        android:gravity="center_horizontal"
        android:layout_margin="10dp"
        android:textStyle="bold"
        android:paddingBottom="20dp"
    />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_emailu"
        android:hint="Email Update"
        android:editable="false"
    />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_passwordu"
        android:hint="Password Update"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_usernameu"
        android:hint="Username Update (NIM)"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/input_namau"
        android:hint="Nama Update"/>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:gravity="center">
        <Button
            android:layout_weight="1"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:id="@+id/btn_update"
            android:text="Update"
            android:onClick="updateData"
```

```

        android:textColor="@color/white"/>

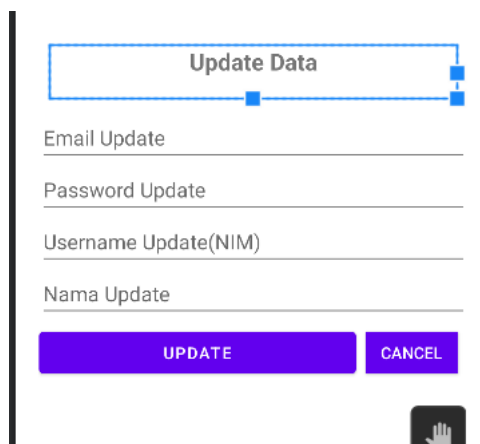
        <Button
            android:id="@+id/btn_cancel"
            style="@style/btn_Style"
            android:text="Cancel"
            android:onClick="cancelData"
            android:textColor="@color/white"/>

    </LinearLayout>

</LinearLayout>

```

Output



Activity_itemdataku.xml (TAMPILAN LAYOUT CARDVIEW)

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.cardview.widget.CardView
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="8dp">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:padding="8dp">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:id="@+id/tv_emailku"/>
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:id="@+id/tv_namaku"/>
        <TextView

```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tv_akunku"/>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/tv_passku"/>

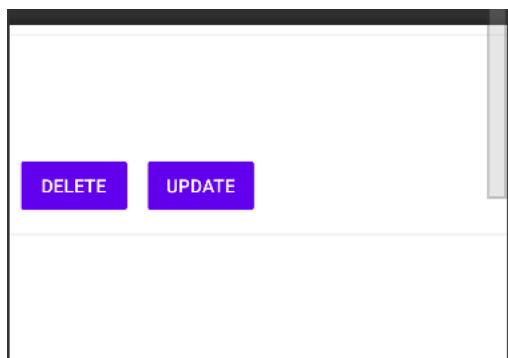
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Delete"
            android:id="@+id/btn_deletecard"
            style="@style/btn_Style"/>
        <Button
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Update"
            android:id="@+id/btn_updatecard"
            style="@style/btn_Style"/>
    </LinearLayout>

</LinearLayout>

</androidx.cardview.widget.CardView>

```

Output



Buat Class Untuk Menampung variable yang akan digunakan untuk inputan pengguna

DataModel (Kotlin Class)

```

package com.example.cardview_sqlite

data class DBModel (

```

```

var email: String = "",
var pass: String = "",
var username: String = "",
var fullname: String = ""
)

```

DBInfo (Object)

Ini menampung data table, disini membuat table dengan nama user dan memiliki 4 kolom.

```

package com.example.cardview_sqlite

import android.provider.BaseColumns

object DBInfo {
    class UserInput: BaseColumns {
        companion object {
            val TABLE_NAME = "users"
            val COL_EMAIL = "email"
            val COL_PASS = "pass"
            val COL_USERNAME = "username"
            val COL_FULLNAME = "fullname"
        }
    }
}

```

DB Helper (Class)

```

package com.example.cardview_sqlite

import android.content.Context
import android.database.Cursor
import android.database.SQLException
import android.database.sqlite.SQLiteConstraintException
import android.database.sqlite.SQLiteDatabase
import android.database.sqlite.SQLiteOpenHelper

class DBHelper(context: Context): SQLiteOpenHelper(context,
DATABASE_NAME, null, DATABASE_VERSION) {
    companion object {
        val DATABASE_NAME = "Users.db"
        val DATABASE_VERSION = 1
        private val SQL_CREATE_ENTRIES =
            "CREATE TABLE " + DBInfo.UserInput.TABLE_NAME + " (" +
            DBInfo.UserInput.COL_EMAIL +
            " VARCHAR(200) PRIMARY KEY, " +
            DBInfo.UserInput.COL_PASS + " TEXT, " +
            DBInfo.UserInput.COL_USERNAME + " VARCHAR(200), " +
            " + DBInfo.UserInput.COL_FULLNAME +
            " TEXT) "
        private val SQL_DELETE_ENTRIES = "DROP TABLE IF EXISTS " +
            DBInfo.UserInput.TABLE_NAME
    }
}

```



```

        override fun onCreate(db: SQLiteDatabase?) {
            db?.execSQL(SQL_CREATE_ENTRIES)
        }

        override fun onUpgrade(db: SQLiteDatabase?, oldVersion: Int,
newVersion: Int) {
            onUpgrade(db, oldVersion, newVersion)
        }

        @Throws(SQLiteConstraintException::class)
        fun insertData(emailin: String, passin: String, usernamein:
String, fullnamein: String): Boolean {
            val db = writableDatabase
            val namatable = DBInfo.UserInput.TABLE_NAME
            val emailt = DBInfo.UserInput.COL_EMAIL
            val passt = DBInfo.UserInput.COL_PASS
            val usernamet = DBInfo.UserInput.COL_USERNAME
            val fullnamet = DBInfo.UserInput.COL_FULLNAME
            var sql = "INSERT INTO "+ namatable + "("+emailt+",
"+passt+", "+usernamet+", "+fullnamet+") " +
                "VALUES ('"+emailin+"', '"+passin+"',
 '"+usernamein+"', '"+fullnamein+"')"
            db.execSQL(sql)
            return true
        }

        fun fullData(): ArrayList<DBModel> {
//            val users = ArrayList<DBModel>()
            val users = arrayListOf<DBModel>()
            val db = writableDatabase
            var cursor: Cursor? = null
            try {
                cursor = db.rawQuery("SELECT * FROM
"+DBInfo.UserInput.TABLE_NAME, null)
            } catch (e: SQLException) {
                db.execSQL(SQL_CREATE_ENTRIES)
                return ArrayList()
            }

            var emailt: String
            var passt: String
            var usernamet: String
            var fullnamet: String
            if (cursor!!.moveToFirst()) {
                while (cursor.isAfterLast==false) {
                    emailt =
cursor.getString(cursor.getColumnIndex(DBInfo.UserInput.COL_EMAIL))
                    passt =
cursor.getString(cursor.getColumnIndex(DBInfo.UserInput.COL_PASS))
                    usernamet =
cursor.getString(cursor.getColumnIndex(DBInfo.UserInput.COL_USERNAME
))
                    fullnamet =
cursor.getString(cursor.getColumnIndex(DBInfo.UserInput.COL_FULLNAME
))

                    users.add(DBModel(emailt, passt, usernamet,
fullnamet))
                }
            }
        }

```

```

        cursor.moveToNext()
    }
}
return users
}
fun deleteData(emailin: String){
    val db = writableDatabase
    val namatablet = DBInfo.UserInput.TABLE_NAME
    val emailt = DBInfo.UserInput.COL_EMAIL
    val sql = "DELETE FROM " + namatablet + " WHERE
"+emailt+"='"+emailin+"'"
    db.execSQL(sql)
}
fun updateData(emailin: String, passin: String, usernamein:
String, fullnamein: String){
    val db = writableDatabase
    val namatablet = DBInfo.UserInput.TABLE_NAME
    val emailt = DBInfo.UserInput.COL_EMAIL
    val passt = DBInfo.UserInput.COL_PASS
    val usernamet = DBInfo.UserInput.COL_USERNAME
    val fullnamet = DBInfo.UserInput.COL_FULLNAME
    var sql = "UPDATE " + namatablet + " SET " +
        usernamet+"='"+usernamein+"',
"+fullnamet+"='"+fullnamein+"', "+passt+"='"+passin+" ' "+
        "WHERE "+emailt+"='"+emailin+"'"
    db.execSQL(sql)
}
}

```

Class DBAdapter

```

package com.example.cardview_sqlite

import android.content.Intent
import android.os.Bundle
import android.view.LayoutInflater
import android.view.View
import android.view.ViewGroup
import android.widget.Button
import android.widget.TextView
import androidx.recyclerview.widget.RecyclerView

class DBAdapter(private val listDataku: ArrayList<DBModel>):
RecyclerView.Adapter<DBAdapter.CardViewHolder>() {
    inner class CardViewHolder(itemV: View):
RecyclerView.ViewHolder(itemV) {
        var tvemailku: TextView =
itemV.findViewById(R.id.tv_emailku)
        var tvpassku: TextView = itemV.findViewById(R.id.tv_passku)
        var tvakunku: TextView = itemV.findViewById(R.id.tv_akunku)
        var tvnamaku: TextView = itemV.findViewById(R.id.tv_namaku)
        var btndelete: Button =

```

```

itemV.findViewById(R.id.btn_deletecard)
    var btnupdate: Button =
itemV.findViewById(R.id.btn_updatecard)

    }

    override fun onCreateViewHolder(parent: ViewGroup, viewType:
Int): CardViewHolder {
        val view: View =
LayoutInflater.from(parent.context).inflate(R.layout.item_dataku,
parent, false)
        return CardViewHolder(view)
    }

    override fun onBindViewHolder(holder: CardViewHolder, position:
Int) {
        val dataku = listDataku[position]
        holder.tvemailku.text = dataku.email
        holder.tvpassku.text = dataku.pass
        holder.tvakunku.text = dataku.username
        holder.tvnamaku.text = dataku.fullname

        holder.btnDelete.setOnClickListener {
            var adapterDBHelper: DBHelper
            adapterDBHelper = DBHelper(holder.itemView.context)
            adapterDBHelper.deleteData(dataku.email)
            listDataku.removeAt(position)
            notifyDataSetChanged()
        }

        holder.btnupdate.setOnClickListener {
            val pindahUpdAc = Intent(holder.itemView.context,
UpdateActivity::class.java)
            val bundle = Bundle()
            bundle.putString("emailk", dataku.email)
            bundle.putString("usernamek", dataku.username)
            bundle.putString("fullnamek", dataku.fullname)
            bundle.putString("passk", dataku.pass)
            pindahUpdAc.putExtras(bundle)
            holder.itemView.context.startActivity(pindahUpdAc)
        }
    }
    override fun getItemCount(): Int {
        return listDataku.size
    }
}

```

RVDBActivity. kt

```

package com.example.cardview_sqlite

import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import androidx.recyclerview.widget.LinearLayoutManager
import androidx.recyclerview.widget.RecyclerView

```

```

class RvDbActivity : AppCompatActivity() {
    private lateinit var rv_tampilanku: RecyclerView
    lateinit var userDBHelper: DBHelper
    private var list: ArrayList<DBModel> = arrayListOf()
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_rv_db)
        rv_tampilanku = findViewById(R.id.rv_tampilkan)
        rv_tampilanku.setHasFixedSize(true)
        userDBHelper = DBHelper(this)
        list.addAll(userDBHelper.fullData())
        rv_tampilanku.layoutManager = LinearLayoutManager(this)
        var cardData = DBAdapter(list)
        rv_tampilanku.adapter = cardData
    }
}

```

UpdateActivity.kt

```

package com.example.cardview_sqlite

import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.view.View
import android.widget.EditText

class UpdateActivity : AppCompatActivity() {
    lateinit var userDBHelper: DBHelper
    lateinit var inputemail: EditText
    lateinit var inputpass: EditText
    lateinit var inputusername: EditText
    lateinit var inputfullname: EditText
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_update)
        inputemail = findViewById(R.id.input_emailu)
        inputpass = findViewById(R.id.input_passwordu)
        inputusername = findViewById(R.id.input_usernameu)
        inputfullname = findViewById(R.id.input_namau)
        userDBHelper = DBHelper(this)
        val bundle = intent.extras
        if (bundle != null) {
            inputemail.setText(bundle.getString("emailk"))
            inputusername.setText(bundle.getString("usernamek"))
            inputpass.setText(bundle.getString("passk"))
            inputfullname.setText(bundle.getString("fullnamek"))
        }
    }
    fun updateData(v: View) {
        var emailin = inputemail.text.toString()
        var passin = inputpass.text.toString()
        var usernamein = inputusername.text.toString()
    }
}

```

```

        var fullnamein = inputfullname.text.toString()
        userDBHelper.updateData(emailin, passin, usernamein,
fullnamein)
        var pindah = Intent(this, RvDbActivity::class.java)
        startActivity(pindah)
    }
    fun cancelData(v: View){
        var pindah = Intent(this, RvDbActivity::class.java)
        startActivity(pindah)
    }
}

```

MainActivity.kt

```

package com.example.cardview_sqlite

import android.content.Intent
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.view.View
import android.widget.EditText
class MainActivity : AppCompatActivity() {
    lateinit var userDBHelper: DBHelper
    lateinit var inputemail: EditText
    lateinit var inputpass: EditText
    lateinit var inputusername: EditText
    lateinit var inputfullname: EditText
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        inputemail = findViewById(R.id.input_email)
        inputpass = findViewById(R.id.input_password)
        inputusername = findViewById(R.id.input_username)
        inputfullname = findViewById(R.id.input_nama)
        userDBHelper = DBHelper(this)
    }
    fun addData(v: View){
        var emailin = inputemail.text.toString()
        var passin = inputpass.text.toString()
        var usernamein = inputusername.text.toString()
        var fullnamein = inputfullname.text.toString()
        userDBHelper.insertData(emailin, passin, usernamein,
fullnamein)
        inputemail.setText("")
        inputpass.setText("")
        inputusername.setText("")
        inputfullname.setText("")
    }
    fun showAll(v: View){
        var pindah = Intent(this, RvDbActivity::class.java)
        startActivity(pindah)
    }
}

```

