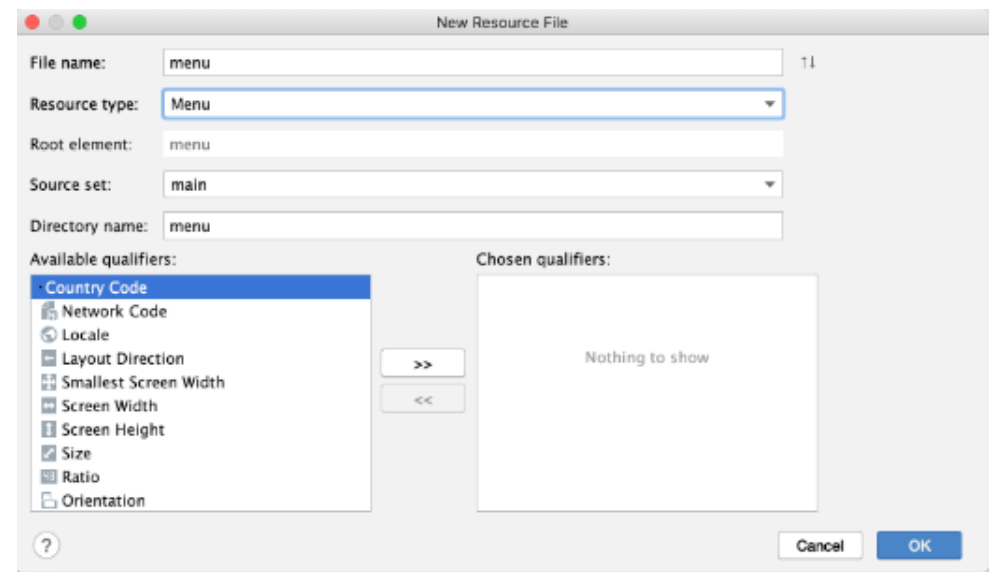```
Buat Project Baru, berikan nama Aplication >
Empty Activity
```
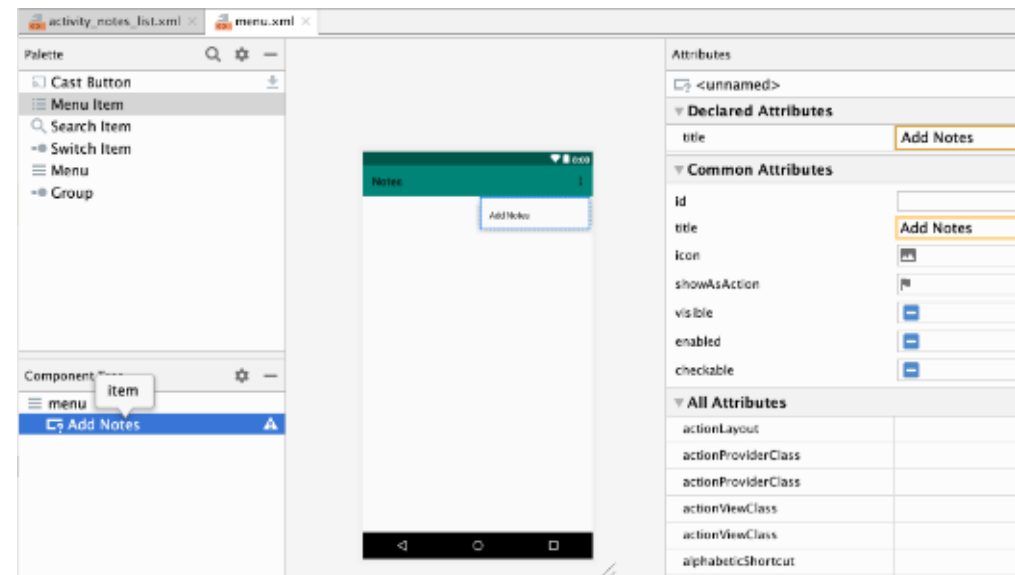
```
Tambahkan 2 buat Empty Activity lagi,
NotesListActivity & NotesUpdateActivity
```

```java
public class MainActivity extends AppCompatActivity {

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

        View decorView = getWindow().getDecorView();
        decorView.setSystemUiVisibility(View.SYSTEM_UI_FLAG_FULLSCREEN);
        new Handler().postDelayed(new Runnable() {
            @Override
            public void run() {
                startActivity(new Intent(MainActivity.this, NotesListActivity.class));
                finish();
            }
        }, 2500);
    }
}
```
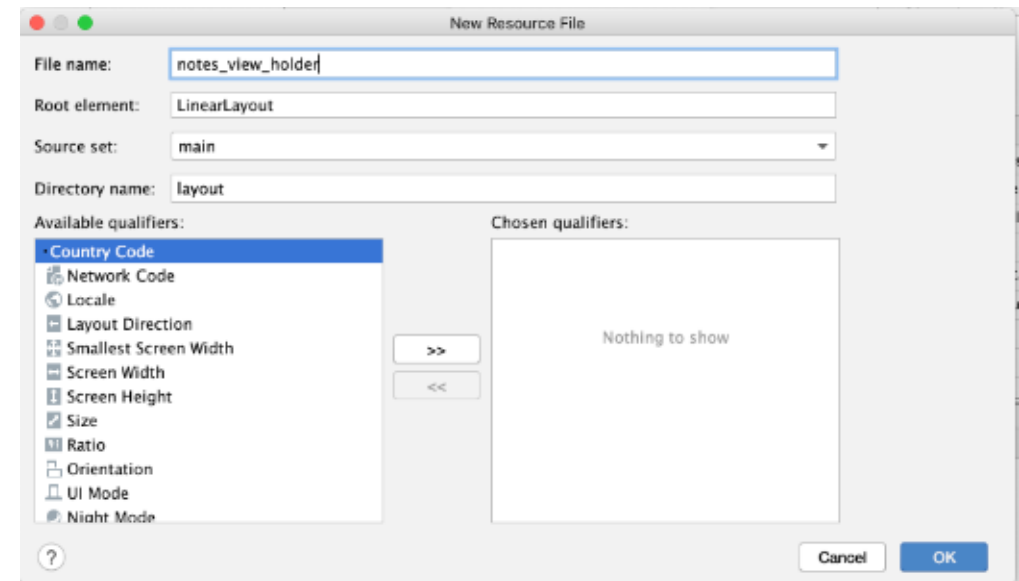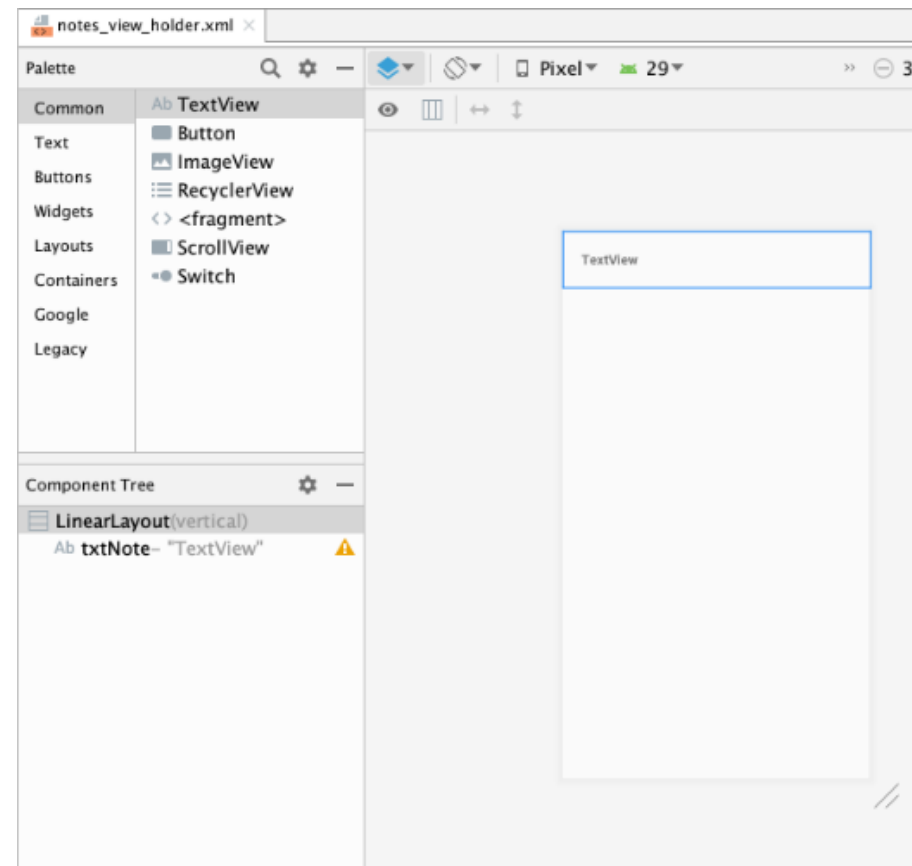
Pada folder res > klik kanan > new Android Resource File

Tambahkan 1 menu item Add Notes

Buat notes_view_holder.xml di res > layout

Berikan 1 buah TextView untuk penampung notes, berikan juga id nya

```java
public class Notes {
    String id;
    String notesBody;

    public Notes(String id, String notesBody) {
        this.id = id;
        this.notesBody = notesBody;
    }

// Getter Setter...
```

```java
import android.view.View;
import android.widget.TextView;

import androidx.annotation.NonNull;
import androidx.recyclerview.widget.RecyclerView;

public class NotesListViewHolder extends RecyclerView.ViewHolder {
    TextView textView;

    public NotesListViewHolder(@NonNull View itemView) {
        super(itemView);
        textView = itemView.findViewById(R.id.txtNote);
    }
}
```

```
implementation 'androidx.recyclerview:recyclerview:1.1.0'
```

```java
public class NotesListAdapter extends RecyclerView.Adapter {
    List<Notes> noteList;

    public NotesListAdapter(List<Notes> noteList) {
        this.noteList = noteList;
    }

    @NonNull
    @Override
    public RecyclerView.ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
        View view = LayoutInflater.from(parent.getContext()).inflate(R.layout.notes_view_holder, parent, false);
        NotesListViewHolder holder = new NotesListViewHolder(view);
        return holder;
    }

    @Override
    public void onBindViewHolder(@NonNull RecyclerView.ViewHolder holder, final int position) {
        ((NotesListViewHolder) holder).textView.setText(noteList.get(position).getNotesBody());
        holder.itemView.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent notesUpdate = new Intent(v.getContext(), NotesUpdateActivity.class);
                notesUpdate.putExtra("note", noteList.get(position).getNotesBody());
                notesUpdate.putExtra("id", noteList.get(position).getId());

                ((Activity) v.getContext()).startActivityForResult(notesUpdate, 1);
            }
        });
        holder.itemView.setOnLongClickListener(new View.OnLongClickListener() {
            @Override
            public boolean onLongClick(View v) {
                new AlertDialog.Builder(v.getContext())
                        .setTitle("Are you sure")
                        .setMessage("Do you want to delete this note")
                        .setPositiveButton("Olrait", new DialogInterface.OnClickListener() {
```

```java
                    @Override
                    public void onClick(DialogInterface dialog, int which) {

                    }
                }).setNegativeButton("Nope", null).show();
                return true;
            }
        });
    }


    @Override
    public int getItemCount() {
        return noteList.size();
    }
}
```

Di activity_notes_list.xml	Di NotesListActivity.java

Tambahkan component RecyclerView

```java
public class NotesListActivity extends AppCompatActivity {

    List<Notes> notes = new ArrayList<>();
    NotesListAdapter notesListAdapter;
    RecyclerView recyclerView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notes_list);
        recyclerView = findViewById(R.id.notesList);
        LinearLayoutManager layout = new LinearLayoutManager(this);
        recyclerView.setLayoutManager(layout);

        notesListAdapter = new NotesListAdapter(notes);
        recyclerView.setAdapter(notesListAdapter);
        notesListAdapter.notifyDataSetChanged();

    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.menu, menu);
        return super.onCreateOptionsMenu(menu);
    }

    @Override
    public void onBackPressed() {

    }
```
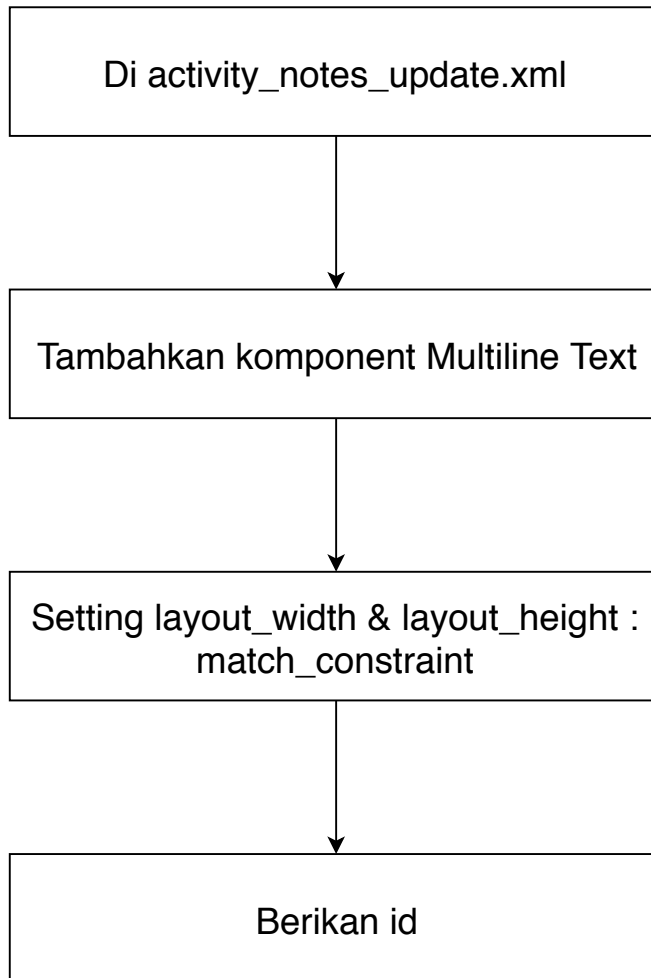
```java
@Override
public boolean onOptionsItemSelected(MenuItem item) {
    int id = item.getItemId();

    if (id == R.id.miAdd) {
        Intent intent = new Intent(this, NotesUpdateActivity.class);
        startActivityForResult(intent,1);
    }

    return super.onOptionsItemSelected(item);
}

@Override
public void onActivityResult(int requestCode, int resultCode, Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if (requestCode == 1) {
        if (resultCode == RESULT_OK) {
        }
    }
}
```

```
┌─────────────────────────────────┐
│   Di activity_notes_update.xml  │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│  Tambahkan komponent Multiline  │
│              Text               │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│ Setting layout_width &          │
│ layout_height :                 │
│         match_constraint        │
└─────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────┐
│            Berikan id           │
└─────────────────────────────────┘
```

Di NotesUpdateActivity

```java
public class NotesUpdateActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notes_update);
        ActionBar actionBar = getSupportActionBar();
        actionBar.setTitle("Notes Update");
        EditText multiLineNote = findViewById(R.id.txtNoteUpdate);
        Intent intent = getIntent();
        String note = intent.getStringExtra("note");
        multiLineNote.setText(note);
    }
}
```

```java
public class DataHelper extends SQLiteOpenHelper {

    private static final String DATABASE_NAME = "enigma.db";
    private static final int DATABASE_VERSION = 1;

    public DataHelper(Context context) {
        super(context, DATABASE_NAME, null, DATABASE_VERSION);
        // TODO Auto-generated constructor stub
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
        String sql = "create table notes(id TEXT,notes_body TEXT);";
        db.execSQL(sql);
    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("DROP TABLE IF EXISTS notes");
        onCreate(db);
    }
}
```

Ubah MainActivity.java

```java
public static DataHelper dataHelper;

@Override
protected void onCreate(Bundle savedInstanceState) {

...

dataHelper = new DataHelper(getApplicationContext());

...

}
```

Buat repository > NotesRepository.java

```java
public class NotesRepository {
    public void updateNotes(String id, String note) {
        SQLiteDatabase db = MainActivity.dataHelper.getWritableDatabase();
        SQLiteStatement stmt;
        if (id != null && id.length() == 0) {
            id = String.valueOf(new Random().nextInt());
            stmt = db.compileStatement("insert into notes values(?,?)");
            stmt.bindString(1, id);
            stmt.bindString(2, note);
        } else {
            stmt = db.compileStatement("update notes set notes_body=? where id = ?");
            stmt.bindString(1, note);
            stmt.bindString(2, id);
        }
        stmt.execute();
    }


    public List<Notes> selectAllNotes() {
        SQLiteDatabase db = MainActivity.dataHelper.getWritableDatabase();
        Cursor c = db.rawQuery("select * from notes", null);
        List<Notes> result = new ArrayList<>();

        if (c != null) {
            if (c.moveToFirst()) {
                do {
                    result.add(new Notes(c.getString(0), c.getString(1)));
                } while (c.moveToNext());
            }
        }
        c.close();
        return result;
    }
}
```

Buat sebuah res > layout > notes_update_menu.xml

Ubah NotesUpdateActivity

```java
public class NotesUpdateActivity extends AppCompatActivity {
    EditText multiLineNote;
    String idNote;
    String note;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        ...
        ActionBar actionBar = getSupportActionBar();
        actionBar.setDisplayShowCustomEnabled(true);
        actionBar.setTitle("");
        LayoutInflater layoutInflater = LayoutInflater.from(this);
        View customMenu = layoutInflater.inflate(R.layout.notes_update_menu, null);
        actionBar.setCustomView(customMenu);
        multiLineNote = findViewById(R.id.txtNoteUpdate);
        Intent intent = getIntent();
        idNote = intent.getStringExtra("id");
        note = intent.getStringExtra("note");
        multiLineNote.setText(note);

        ImageButton button = findViewById(R.id.btnSave);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (idNote == null) {
                    idNote = "";
                }
                NotesRepository notesRepository = new NotesRepository();
                notesRepository.updateNotes(idNote, multiLineNote.getText().toString());
                Intent replyIntent = new Intent();
                setResult(RESULT_OK, replyIntent);
                finish();
            }
        });
    }
}
```

```java
public class NotesListActivity extends AppCompatActivity {

...
    NotesRepository notesRepository;



@Override
protected void onCreate(Bundle savedInstanceState) {
...
    notesRepository = new NotesRepository();
    getNoteList();
}

private void getNoteList() {
    notes = notesRepository.selectAllNotes();
    notesListAdapter = new NotesListAdapter(notes);
    recyclerView.setAdapter(notesListAdapter);
    notesListAdapter.notifyDataSetChanged();

}

@Override
public void onActivityResult(int requestCode, int resultCode, Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if (requestCode == 1) {
        if (resultCode == RESULT_OK) {
            getNoteList();
        }
    }
}
```
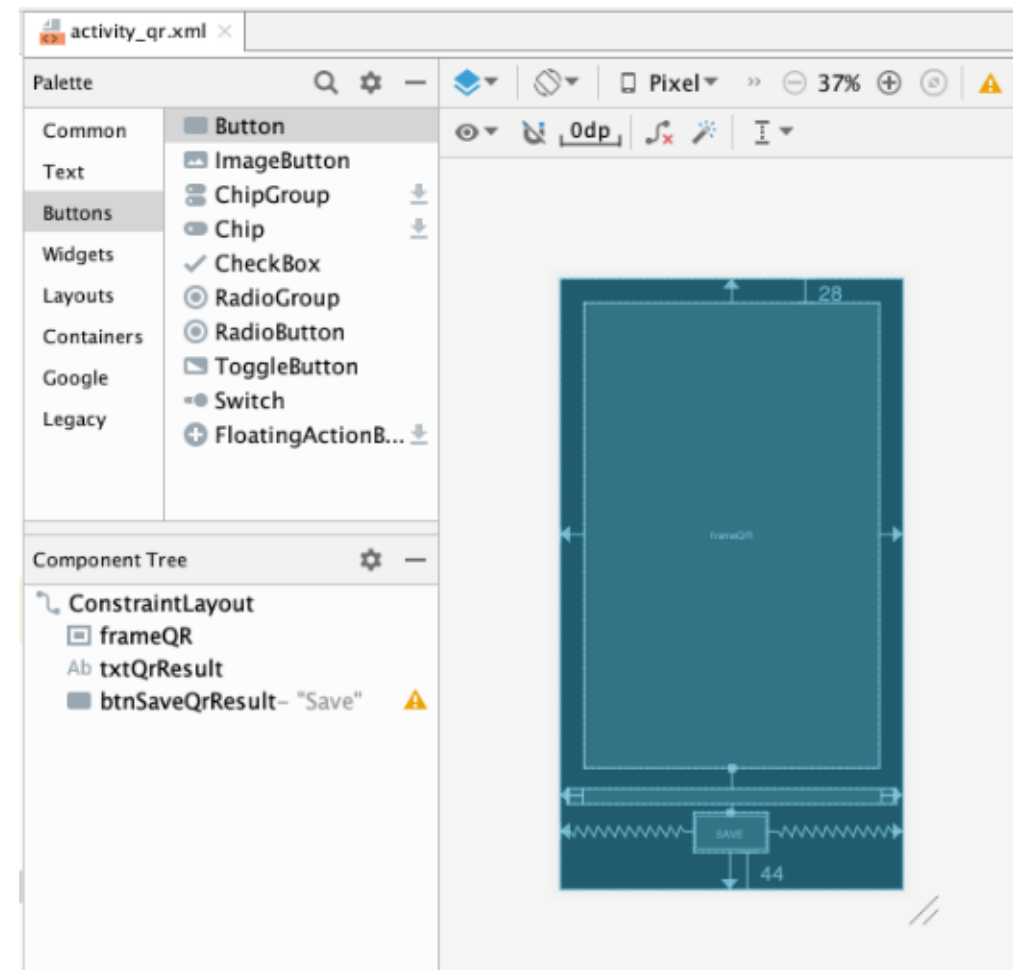
```
Update gradle dependencies

implementation 'me.dm7.barcodescanner:zxing:1.9.13'

Klik Sync Now

Update AndroidManifest.xml

<uses-permission android:name="android.permission.CAMERA" />
```

Buat sebuah activity baru

QRActivity.java

```java
public class QRActivity extends AppCompatActivity implements ZXingScannerView.ResultHandler {
    private ZXingScannerView mScannerView;
    private TextView txtQrResult;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_qr);
        ActionBar actionBar = getSupportActionBar();
        actionBar.setTitle("Scan QR");
        mScannerView = new ZXingScannerView(this);
        mScannerView.setAutoFocus(true);
        mScannerView.setResultHandler(this);
        FrameLayout frameLayout = findViewById(R.id.frameQR);
        frameLayout.addView(mScannerView);

        txtQrResult = findViewById(R.id.txtQrResult);
        Button btnSaveQrResult = findViewById(R.id.btnSaveQrResult);
        btnSaveQrResult.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {
                NotesRepository notesRepository = new NotesRepository();
                notesRepository.updateNotes("", txtQrResult.getText().toString());
                Intent replyIntent = new Intent();
                setResult(RESULT_OK, replyIntent);
                finish();
            }
        });
    }
```

```java
@Override
public void onResume() {
    if (ContextCompat.checkSelfPermission(this, Manifest.permission.CAMERA)
            != PackageManager.PERMISSION_GRANTED) {
        ActivityCompat.requestPermissions(this,
                new String[]{Manifest.permission.CAMERA}, 100);
    }
    mScannerView.startCamera();
    super.onResume();
}

@Override
public void onPause() {
    super.onPause();
    mScannerView.stopCamera();
}

@Override
public void handleResult(Result rawResult) {
    txtQrResult.setText(rawResult.getText());
}

@Override
public void onPointerCaptureChanged(boolean hasCapture) {

}
}
```
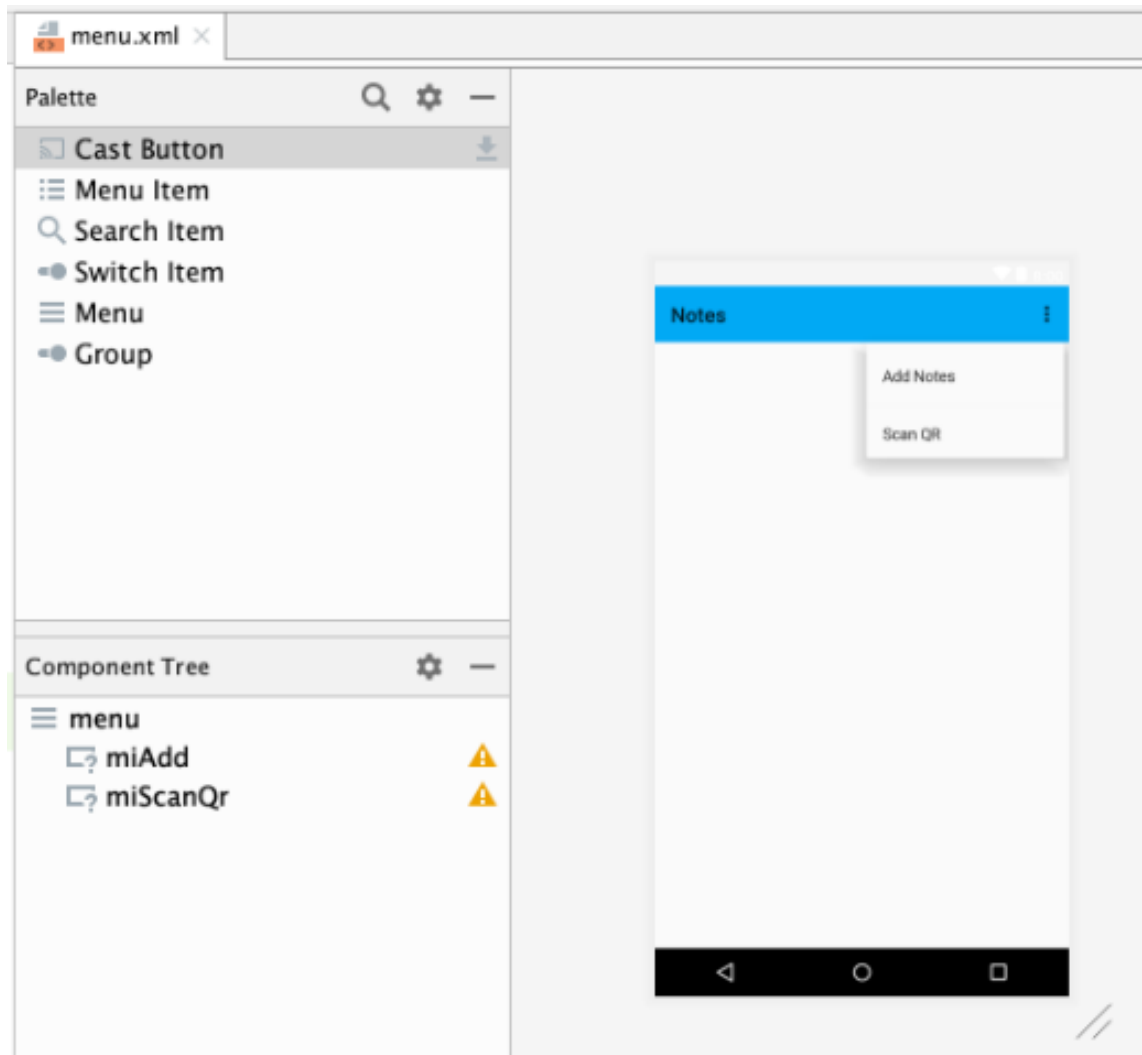
Ubah res > menu > menu.xml

Ubah NotesListActivity.java

```java
@Override
public boolean onOptionsItemSelected(MenuItem item) {
    int id = item.getItemId();

    if (id == R.id.miAdd) {
        Intent intent = new Intent(this, NotesUpdateActivity.class);
        startActivityForResult(intent, 1);
    }
    if (id == R.id.miScanQr) {
        Intent intent = new Intent(this, QRActivity.class);
        startActivityForResult(intent, 1);
    }

    return super.onOptionsItemSelected(item);
}
```

Untuk testing QR, harus menggunakan real device dengan mengaktifkan Developer Options > USB debugging

Silahkan Scan QR Berikut, atau bisa buat sendiri di https://www.the-qrcode-generator.com/