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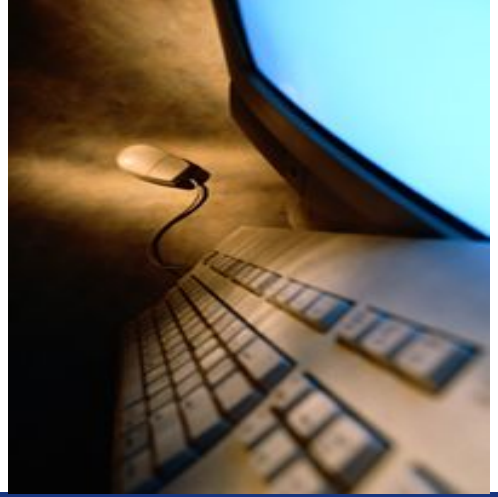
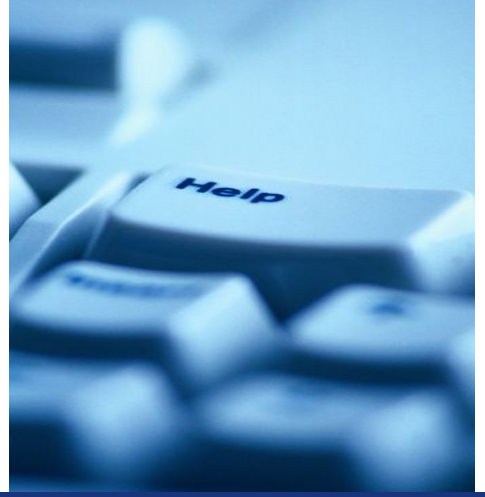
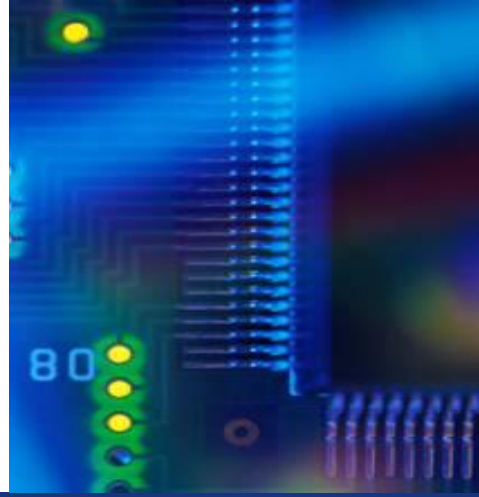





FAKULTAS TEKNOLOGI INFORMASI

Mobile Programming

[PG119/ 3 SKS]

Riskiana Wulan, MKom

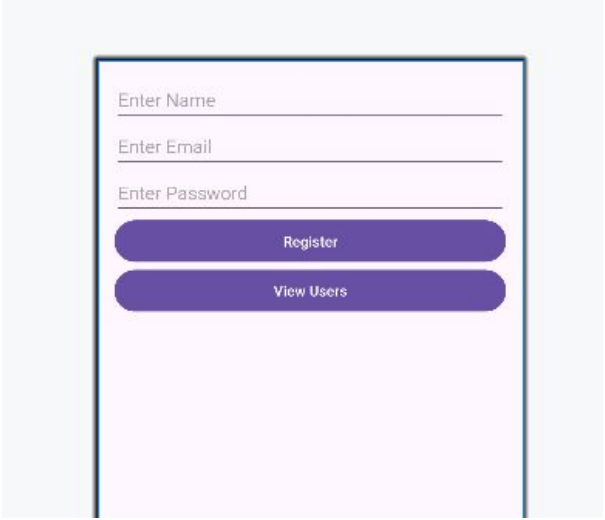
Recycler View

Sample on button click register

```
buttonRegister.setOnClickListener(view -> {
    String name = editTextName.getText().toString().trim();
    String email = editTextEmail.getText().toString().trim();
    String password = editTextPassword.getText().toString().trim();

    if (!name.isEmpty() && !email.isEmpty() && !password.isEmpty()) {
        User user = new User();
        user.setName(name);
        user.setEmail(email);
        user.setPassword(password);
        Log.d( tag: "user", user.toString());
        new Thread(() -> appDatabase.userDao().insertUser(user)).start();

        Toast.makeText( context: MainActivity.this,  text: "User registered successfully!", Toast.LENGTH_SHORT).show();
    } else {
        Toast.makeText( context: MainActivity.this,  text: "Please fill all fields!", Toast.LENGTH_SHORT).show();
    }
});
```




Create Page to display list of Users using Recycler View

Recycler View

A RecyclerView is a ViewGroup that efficiently displays a large number of data items by reusing ("recycling") the views that are not visible to the user.

Components of RecyclerView

1. **RecyclerView**: The container for displaying the list.
2. **Adapter**: Connects data to the RecyclerView and tells it how to bind data to views.
3. **ViewHolder**: Holds references to views for each item in the list.

Step to Implement RecyclerView

1. Add RecyclerView to your layout file.
2. Create a layout for individual list items.
3. Create a custom Adapter class.
4. Bind hardcoded data to the adapter.
5. Attach the adapter to the RecyclerView.

Layout

```
<androidx.recyclerview.widget.RecyclerView
android:id="@+id/recyclerView"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:padding="16dp" />
```


Layout for list items

```
<LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:padding="8dp">

        <TextView
        android:id="@+id/textViewName"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Item Name"
        android:textSize="16sp" />
</LinearLayout>
```

Custom Adapter Class

```
public class UserAdapter extends
RecyclerView.Adapter<UserAdapter.UserViewHolder> {

  private User[] users;

  public UserAdapter(User[] users) {
    this.users = users;
  }

  @NonNull
  @Override
  public UserViewHolder onCreateViewHolder(@NonNull ViewGroup parent,
int viewType) {
    View view = LayoutInflater.from(parent.getContext())
        .inflate(R.layout.item_user, parent, false);
    return new UserViewHolder(view);
  }
```

```
@Override
  public void onBindViewHolder(@NonNull UserViewHolder holder, int position) {
    holder.bind(users[position]);
  }

  @Override
  public int getItemCount() {
    return users.length;
  }

  static class UserViewHolder extends RecyclerView.ViewHolder {
    TextView textViewName;
    TextView textViewEmail;

    public UserViewHolder(@NonNull View itemView) {
      super(itemView);
      textViewName = itemView.findViewById(R.id.textViewName);
      textViewEmail = itemView.findViewById(R.id.textViewEmail);
    }
    public void bind(User user){
      textViewName.setText(user.name);
      textViewEmail.setText(user.email);
    }
  }
```

Activity Class

Generate hardcoded value and setAdapter

```
public class ViewUsersActivity extends AppCompatActivity {
        private RecyclerView recyclerView;  3 usages


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

            recyclerView = findViewById(R.id.recyclerViewUsers);
            recyclerView.setLayoutManager(new LinearLayoutManager( context: this));
            User[] users = {
                    new User( name: "Bob",  email: "bob@gmail.com"),
                    new User( name: "Alice",  email: "alice@gmail.com")
            };
            UserAdapter adapter = new UserAdapter(users);
            recyclerView.setAdapter(adapter);
        }
}
```

Run application

Bob
bob@gmail.com

Alice
alice@gmail.com

Device Explorer

- View -> tool windows-> Device Explorer
- The apps'data directory :

  /data/data/<your.application.package.name>/databases/

Your database will be found in there.