

# Android Development

Ch-02

# Android UI

- During runtime, the **XML UI in the onCreate()** method handler is **loaded** in Activity class, using the **setContentView()** method of the Activity class.
- An activity contains **views** and **ViewGroups** classes.
- **View:** a **widget** that has an appearance on screen.
- **Examples:** **buttons**, **labels**, and **text boxes**.
- **ViewGroup:** using it; **One or more views** can be grouped.
- **Examples:** **Layouts**.

# Android UI

- **R.java file:** is an android system generated class, created during build process.
- Anything where inside a "**res**" directory has id, saved as java variable in R class.
- **setContentView()** function: gets the content of activity.xml as a java objects to deal with it programmatically.

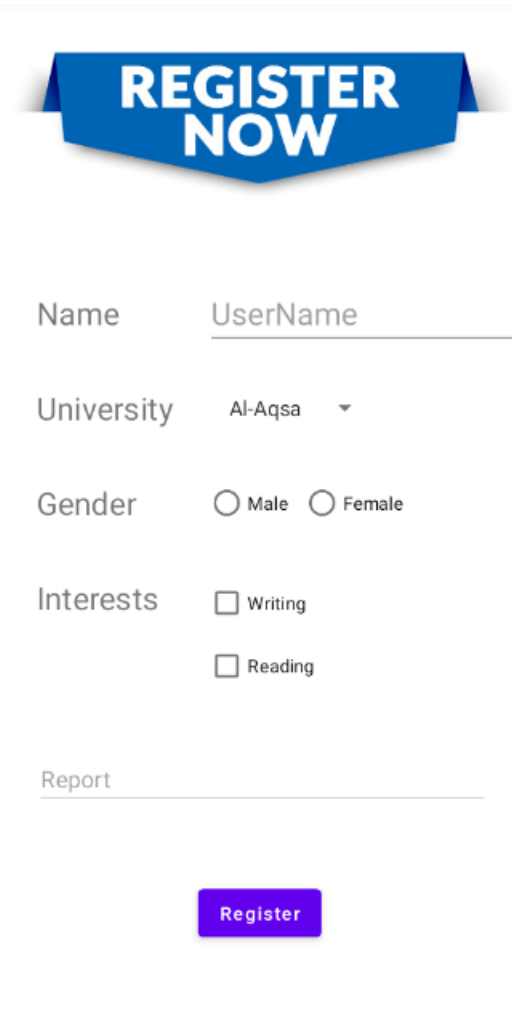
# Android Alert Dialogue

- **Alert Dialogue:** is a small window that prompt messages to the user, May include actions.
- **Title:** for Alert Dialogue title.
- **Content Area:** is a content message of Alert Dialogue.
- **Action Buttons:** display action buttons to interact with users.



# Example: Registration Form

- Program the following activity using **Activity**. **Java** class.
- Consider dealing with Alert Dialogue.
- By Android studio IDE.



A registration form UI mockup. At the top is a blue banner with the text "REGISTER NOW" in white. Below the banner are several form fields: "Name" with a text input field containing "UserName", "University" with a dropdown menu showing "Al-Aqsa", "Gender" with two radio buttons labeled "Male" and "Female", "Interests" with two checkboxes labeled "Writing" and "Reading", and "Report" with a text input field. At the bottom right is a blue button labeled "Register".

**REGISTER NOW**

Name

University

Gender ☐ Male ☐ Female

Interests ☐ Writing ☐ Reading

Report

**Register**

# Example: Registration Form (1)

```
public class TestActivity extends AppCompatActivity {  
  
    EditText ed_username, ed_report;  
    Spinner sp_university;  
    RadioButton rb_male, rb_female;  
    CheckBox ch_writing, ch_reading;  
    Button btn_register;  
    RadioGroup rg_gender;  
    String name, university, gender, interest;
```

# Example: Registration Form (2)

@Override

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_test);  
  
    ed_username=findViewById(R.id.ed_username);  
    sp_university=findViewById(R.id.sp_university);  
    rg_gender=findViewById(R.id.rg_gender);  
    rb_male=findViewById(R.id.rb_male);  
    rb_female=findViewById(R.id.rb_female);  
    ch_reading=findViewById(R.id.ch_reading);  
    ch_writing=findViewById(R.id.ch_writing);  
    btn_register=findViewById(R.id.btn_register);  
    ed_report=findViewById(R.id.ed_report);  
}
```

# Example: Registration Form (3)

```
btn_register.setOnClickListener(new OnClickListener() {  
    @Override  
    public void onClick(View view) {  
        if (ed_username.getText().toString().isEmpty()){  
            Toast.makeText(context: TestActivity.this,  
                text: "fill the empty username space", Toast.LENGTH_SHORT).show();  
            return;  
        }else {  
            name = ed_username.getText().toString();  
        }  
        university= sp_university.getSelectedItem().toString();  
  
        if (rb_female.isChecked())  
            gender="Female";  
        else if (rb_male.isChecked())  
            gender="Male";  
        else{  
            Toast.makeText(context: TestActivity.this,  
                text: "choose your gender", Toast.LENGTH_SHORT).show();  
            return;  
        }  
    }  
});
```



# Example: Registration Form (4)

```
    if (ch_reading.isChecked()){
        interest = "reading";
    }

    if (ch_writing.isChecked()){
        interest+= "\t writing";
    }

    if (interest.isEmpty()){
        Toast.makeText(context TestActivity.this,
            text: "choose your interests", Toast.LENGTH_SHORT).show();
        return;
    }

    String report = "Name: "+name+ "\n"+
        "University: "+ university+"\n"+
        "Gender: "+ gender+"\n"+
        "Interests: "+ interest+ ".";

    createAlertDialog(report, ed_report);
}
});
```

# Example: Registration Form (5)

```
private void createAlertDialogue(String report, EditText ed_report) {
    AlertDialog.Builder builder = new AlertDialog.Builder(context: TestActivity.this);
    builder.setIcon(R.drawable.alert_icon);
    builder.setTitle(R.string.dialog_title);
    builder.setMessage(R.string.dialog_message);
    builder.setPositiveButton(text: "Yes", new DialogInterface.OnClickListener() {
        @Override
        public void onClick(DialogInterface dialogInterface, int i) {
            ed_report.setText(report);
        }
    });
    builder.setNegativeButton(text: "No", new DialogInterface.OnClickListener() {
        @Override
        public void onClick(DialogInterface dialogInterface, int i) {
            Toast.makeText(context: TestActivity.this, text: "OK", Toast.LENGTH_SHORT).show();
        }
    });

    AlertDialog alertDialog = builder.create();
    alertDialog.getWindow().getAttributes().windowAnimations = R.style.MyDialogAnimation;
    alertDialog.show();
}
```

# Example: Registration Form (6)

- In R.style path:

```
<style name="MyDialogAnimation">
    <item name="android:windowEnterAnimation">@android:anim/slide_in_left</item>
    <item name="android:windowExitAnimation">@android:anim/slide_out_right</item>
</style>
```

- In R.string path:

```
<string name="dialog_title">Alert Dialog Title</string>
<string name="dialog_message">Are you sure of the information?</string>
```

- Another way to deal with RadioGroups:

```
//way2
rg_gender.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener() {
    @Override
    public void onCheckedChanged(RadioGroup radioGroup, int i) {
        RadioButton rb= findViewById(i);
        gender= rb.getText().toString();
    }
});
```

# Workable Slide

Done

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