

## simple code to get input from the user and then display it in next page (intent)

### activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/inputText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter something" />

    <Button
        android:id="@+id/submitButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Submit" />

</LinearLayout>
```

### MainActivity.kt

```
import android.content.Intent
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val inputText = findViewById<EditText>(R.id.inputText)
        val submitButton = findViewById<Button>(R.id.submitButton)
```

```

        submitButton.setOnClickListener {
            val userInput = inputText.text.toString()

            // Create an Intent to start the SecondActivity
            val intent = Intent(this, SecondActivity::class.java)
            intent.putExtra("USER_INPUT", userInput) // Pass the input to
the next activity
            startActivity(intent)
        }
    }
}

```

### Activity\_second.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <TextView
        android:id="@+id/displayText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="18sp" />

</LinearLayout>

```

### SecondActivity.kt

```

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)

        val displayText = findViewById<TextView>(R.id.displayText)
    }
}

```

```

        // Get the input passed from the MainActivity
        val userInput = intent.getStringExtra("USER_INPUT")
        displayText.text = userInput ?: "No input provided" // Display the
input or a default message
    }
}

```

**what if we want to pass more than 1 input to next page ?**

**MainActivity.kt**

```

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

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val inputText1 = findViewById<EditText>(R.id.inputText1)
        val inputText2 = findViewById<EditText>(R.id.inputText2)
        val submitButton = findViewById<Button>(R.id.submitButton)

        submitButton.setOnClickListener {
            val userInput1 = inputText1.text.toString()
            val userInput2 = inputText2.text.toString()

            // Create an Intent to start the SecondActivity
            val intent = Intent(this, SecondActivity::class.java)
            intent.putExtra("USER_INPUT_1", userInput1) // Pass the first
input
            intent.putExtra("USER_INPUT_2", userInput2) // Pass the second
input
            startActivity(intent)
        }
    }
}

```

## SecondActivity.kt

```
import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)

        val displayText1 = findViewById<TextView>(R.id.displayText1)
        val displayText2 = findViewById<TextView>(R.id.displayText2)

        // Get the inputs passed from the MainActivity
        val userInput1 = intent.getStringExtra("USER_INPUT_1")
        val userInput2 = intent.getStringExtra("USER_INPUT_2")

        displayText1.text = userInput1 ?: "No first input provided" //
Display the first input
        displayText2.text = userInput2 ?: "No second input provided" //
Display the second input
    }
}
```

## Temperature conversion: Activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/temperatureInput"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
```

```

        android:hint="Enter temperature in Celsius"
        android:inputType="numberDecimal" />

        <Button
            android:id="@+id/convertButton"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Convert to Fahrenheit" />

    </LinearLayout>

```

## MainActivity.kt

```

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

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val temperatureInput =
            findViewById<EditText>(R.id.temperatureInput)
        val convertButton = findViewById<Button>(R.id.convertButton)

        convertButton.setOnClickListener {
            val celsius =
                temperatureInput.text.toString().toDoubleOrNull()

            if (celsius != null) {
                // Convert Celsius to Fahrenheit
                val fahrenheit = (celsius * 9 / 5) + 32

                // Create an Intent to start the SecondActivity
                val intent = Intent(this, SecondActivity::class.java)
                intent.putExtra("FAHRENHEIT", fahrenheit) // Pass the
                Fahrenheit value
            }
        }
    }
}

```

```

        startActivity(intent)
    } else {
        temperatureInput.error = "Please enter a valid number"
    }
}
}
}
}

```

## Activity\_second.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <TextView
        android:id="@+id/displayTemperature"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="24sp" />

</LinearLayout>

```

## SecondActivity.kt

```

import android.os.Bundle
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SecondActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_second)

        val displayTemperature =
findViewById<TextView>(R.id.displayTemperature)

        // Get the Fahrenheit value passed from MainActivity
        val fahrenheit = intent.getDoubleExtra("FAHRENHEIT", 0.0)
    }
}

```

```

        displayTemperature.text = String.format("Temperature in
Fahrenheit: %.2f", fahrenheit) // Display the converted temperature
    }
}

```

## display in same page

### MainActivity.kt

```

import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val temperatureInput =
findViewById<EditText>(R.id.temperatureInput)
        val convertButton = findViewById<Button>(R.id.convertButton)
        val displayTemperature =
findViewById<TextView>(R.id.displayTemperature)

        convertButton.setOnClickListener {
            val celsius =
temperatureInput.text.toString().toDoubleOrNull()

            if (celsius != null) {
                // Convert Celsius to Fahrenheit
                val fahrenheit = (celsius * 9 / 5) + 32

                // Display the converted temperature
                displayTemperature.text = String.format("Temperature in
Fahrenheit: %.2f", fahrenheit)
            } else {
                temperatureInput.error = "Please enter a valid number"
                displayTemperature.text = "" // Clear previous output
            }
        }
    }
}

```

```
    }  
    }  
}
```

code for getting 2 dates as input and then find diff of days between the 2 dates.

Users should enter dates in the format **YYYY-MM-DD**.

### MainActivity.kt

```
package com.example.exercise8  
  
import android.os.Bundle  
import android.widget.Button  
import android.widget.EditText  
import android.widget.TextView  
import androidx.appcompat.app.AppCompatActivity  
import java.time.LocalDate  
import java.time.Period  
import java.time.format.DateTimeFormatter  
  
class MainActivity : AppCompatActivity() {  
  
    private lateinit var startDateInput: EditText  
    private lateinit var endDateInput: EditText  
    private lateinit var calculateButton: Button  
    private lateinit var differenceLabel: TextView  
    private lateinit var differenceTextView: TextView  
  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        setContentView(R.layout.activity_main)  
  
        startDateInput = findViewById(R.id.startDateInput)  
        endDateInput = findViewById(R.id.endDateInput)  
        calculateButton = findViewById(R.id.calculateButton)  
        differenceLabel = findViewById(R.id.differenceLabel)  
        differenceTextView = findViewById(R.id.difference)
```



```

        calculateButton.setOnClickListener {
            val startDateStr = startDateInput.text.toString()
            val endDateStr = endDateInput.text.toString()

            val startDate = LocalDate.parse(startDateStr,
DateTimeFormatter.ISO_LOCAL_DATE)
            val endDate = LocalDate.parse(endDateStr,
DateTimeFormatter.ISO_LOCAL_DATE)

            val difference = Period.between(startDate, endDate)

            differenceLabel.visibility = TextView.VISIBLE
            differenceTextView.visibility = TextView.VISIBLE
            differenceTextView.text = "Years: ${difference.years}, Months:
${difference.months}, Days: ${difference.days}"
        }
    }
}

```

## how to do validation for the registration form simple example

### Activity\_registration.xml

```

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/emailInput"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Email" />

    <EditText
        android:id="@+id/passwordInput"
        android:layout_width="match_parent"

```

```

        android:layout_height="wrap_content"
        android:hint="Password"
        android:inputType="textPassword" />

<Button
    android:id="@+id/registerButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Register" />

<TextView
    android:id="@+id/errorTextView"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textColor="@android:color/holo_red_dark"
    android:visibility="gone" />
</LinearLayout>

```

## RegistrationActivity.kt

```

package com.example.registrationform

import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class RegistrationActivity : AppCompatActivity() {

    private lateinit var emailInput: EditText
    private lateinit var passwordInput: EditText
    private lateinit var registerButton: Button
    private lateinit var errorTextView: TextView

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_registration)

        emailInput = findViewById(R.id.emailInput)
        passwordInput = findViewById(R.id.passwordInput)
    }
}

```

```

        registerButton = findViewById(R.id.registerButton)
        errorTextView = findViewById(R.id.errorTextView)

        registerButton.setOnClickListener {
            validateInputs()
        }
    }

    private fun validateInputs() {
        val email = emailInput.text.toString()
        val password = passwordInput.text.toString()

        if (email.isEmpty() ||
!android.util.Patterns.EMAIL_ADDRESS.matcher(email).matches()) {
            errorTextView.text = "Please enter a valid email."
            errorTextView.visibility = TextView.VISIBLE
            return
        }

        if (password.length < 6) {
            errorTextView.text = "Password must be at least 6 characters."
            errorTextView.visibility = TextView.VISIBLE
            return
        }

        errorTextView.visibility = TextView.GONE
        // Proceed with registration logic
    }
}

```

## Storing, Retrieving, and Deleting a Shared Variable

### Activity\_main.xml

```

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText

```

```

        android:id="@+id/inputText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter some text" />

<Button
    android:id="@+id/saveButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Save" />

<Button
    android:id="@+id/loadButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Load" />

<Button
    android:id="@+id/deleteButton"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Delete" />

<TextView
    android:id="@+id/displayText"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingTop="16dp" />
</LinearLayout>

```

## MainActivity.kt

```

package com.example.sharedpreferencesexample

import android.content.Context
import android.os.Bundle
import android.widget.Button
import android.widget.EditText
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

```

```
class MainActivity : AppCompatActivity() {

    private lateinit var inputText: EditText
    private lateinit var saveButton: Button
    private lateinit var loadButton: Button
    private lateinit var deleteButton: Button
    private lateinit var displayText: TextView

    private val sharedPreferences by lazy {
        getSharedPreferences("MyPrefs", Context.MODE_PRIVATE)
    }

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        inputText = findViewById(R.id.inputText)
        saveButton = findViewById(R.id.saveButton)
        loadButton = findViewById(R.id.loadButton)
        deleteButton = findViewById(R.id.deleteButton)
        displayText = findViewById(R.id.displayText)

        saveButton.setOnClickListener {
            saveData()
        }

        loadButton.setOnClickListener {
            loadData()
        }

        deleteButton.setOnClickListener {
            deleteData()
        }
    }

    private fun saveData() {
        val editor = sharedPreferences.edit()
        editor.putString("myKey", inputText.text.toString())
        editor.apply() // Save the changes
    }
}
```

```

private fun loadData() {
    val savedText = sharedPreferences.getString("myKey", "No data
found")
    displayText.text = savedText
}

private fun deleteData() {
    val editor = sharedPreferences.edit()
    editor.remove("myKey")
    editor.apply() // Save the changes
    displayText.text = "Data deleted"
}
}

```

## 1. Dropdown (Spinner) Example

### Activity\_spinner.xml

```

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <Button
        android:id="@+id/calculateButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Calculate" />

    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="match_parent"

```

```
        android:layout_height="wrap_content"
        android:paddingTop="16dp" />
</LinearLayout>
```

## SpinnerActivity.kt

```
package com.example.spinnerexample

import android.os.Bundle
import android.widget.ArrayAdapter
import android.widget.Button
import android.widget.Spinner
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class SpinnerActivity : AppCompatActivity() {

    private lateinit var spinner: Spinner
    private lateinit var calculateButton: Button
    private lateinit var resultTextView: TextView

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_spinner)

        spinner = findViewById(R.id.spinner)
        calculateButton = findViewById(R.id.calculateButton)
        resultTextView = findViewById(R.id.resultTextView)

        val options = arrayOf("Option 1", "Option 2", "Option 3")
        val adapter = ArrayAdapter(this,
            android.R.layout.simple_spinner_item, options)
        spinner.adapter = adapter

        calculateButton.setOnClickListener {
            val selectedOption = spinner.selectedItem.toString()
            val result = when (selectedOption) {
                "Option 1" -> 1
                "Option 2" -> 2
                "Option 3" -> 3
                else -> 0
            }
        }
    }
}
```

```

        }
        resultTextView.text = "Result: $result"
    }
}
}

```

## 2. Checkbox Example

### Activity\_checkbox.xml

```

<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <CheckBox
        android:id="@+id/checkbox1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add 5" />

    <CheckBox
        android:id="@+id/checkbox2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add 10" />

    <Button
        android:id="@+id/calculateButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Calculate" />

    <TextView
        android:id="@+id/resultTextView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:paddingTop="16dp" />
</LinearLayout>

```



## CheckboxActivity.kt

```
package com.example.checkboxexample

import android.os.Bundle
import android.widget.Button
import android.widget.CheckBox
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class CheckboxActivity : AppCompatActivity() {

    private lateinit var checkbox1: CheckBox
    private lateinit var checkbox2: CheckBox
    private lateinit var calculateButton: Button
    private lateinit var resultTextView: TextView

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_checkbox)

        checkbox1 = findViewById(R.id.checkbox1)
        checkbox2 = findViewById(R.id.checkbox2)
        calculateButton = findViewById(R.id.calculateButton)
        resultTextView = findViewById(R.id.resultTextView)

        calculateButton.setOnClickListener {
            var result = 0
            if (checkbox1.isChecked) result += 5
            if (checkbox2.isChecked) result += 10
            resultTextView.text = "Result: $result"
        }
    }
}
```

## 3. Radio Button Example

### Activity\_radiobutton.xml

```
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
```

```

        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:padding="16dp">

        <RadioGroup
            android:id="@+id/radioGroup"
            android:layout_width="match_parent"
            android:layout_height="wrap_content">

            <RadioButton
                android:id="@+id/radioButton1"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Multiply by 2" />

            <RadioButton
                android:id="@+id/radioButton2"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Multiply by 3" />
        </RadioGroup>

        <Button
            android:id="@+id/calculateButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Calculate" />

        <TextView
            android:id="@+id/resultTextView"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:paddingTop="16dp" />
    </LinearLayout>

```

## RadioButtonActivity.kt

```

package com.example.radiobuttonexample

import android.os.Bundle

```

```

import android.widget.Button
import android.widget.RadioButton
import android.widget.RadioGroup
import android.widget.TextView
import androidx.appcompat.app.AppCompatActivity

class RadioButtonActivity : AppCompatActivity() {

    private lateinit var radioGroup: RadioGroup
    private lateinit var calculateButton: Button
    private lateinit var resultTextView: TextView

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_radiobutton)

        radioGroup = findViewById(R.id.radioGroup)
        calculateButton = findViewById(R.id.calculateButton)
        resultTextView = findViewById(R.id.resultTextView)

        calculateButton.setOnClickListener {
            val selectedId = radioGroup.checkedRadioButtonId
            val multiplier = when (selectedId) {
                R.id.radioButton1 -> 2
                R.id.radioButton2 -> 3
                else -> 1
            }
            val result = 5 * multiplier // Example base value
            resultTextView.text = "Result: $result"
        }
    }
}

```

**package com.example.checkboxexample**

```

import android.os.Bundle
import android.widget.Button
import android.widget.CheckBox
import android.widget.TextView

```

```
import androidx.appcompat.app.AppCompatActivity
```

```
class CheckboxActivity : AppCompatActivity() {
```

```
    private lateinit var checkbox1: CheckBox
```

```
    private lateinit var checkbox2: CheckBox
```

```
    private lateinit var checkbox3: CheckBox
```

```
    private lateinit var calculateButton: Button
```

```
    private lateinit var selectedOptionsTextView: TextView
```

```
    private lateinit var resultTextView: TextView
```

```
    override fun onCreate(savedInstanceState: Bundle?) {
```

```
        super.onCreate(savedInstanceState)
```

```
        setContentView(R.layout.activity_checkbox)
```

```
        checkbox1 = findViewById(R.id.checkbox1)
```

```
        checkbox2 = findViewById(R.id.checkbox2)
```

```
        checkbox3 = findViewById(R.id.checkbox3)
```

```
        calculateButton = findViewById(R.id.calculateButton)
```

```
        selectedOptionsTextView =
```

```
        findViewById(R.id.selectedOptionsTextView)
```

```
        resultTextView = findViewById(R.id.resultTextView)
```

```
        calculateButton.setOnClickListener {
```

```
            val selectedOptions = StringBuilder()
```

```
            var totalIncrement = 0
```

```
            if (checkbox1.isChecked) {
```

```
                selectedOptions.append("Option 1\n")
```

```
                totalIncrement += 10
```

```
            }
```

```
            if (checkbox2.isChecked) {
```

```
                selectedOptions.append("Option 2\n")
```

```
                totalIncrement += 40
```

```
            }
```

```
            if (checkbox3.isChecked) {
```

```
                selectedOptions.append("Option 3\n")
```

```
        totalIncrement += 25
    }

    selectedOptionsTextView.text = "Selected
Options:\n$selectedOptions"
    resultTextView.text = "Total Salary Increment: $totalIncrement"
}
}
}
```