**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"**

**}**

**}**

**}**