Creating a BMI calculator as an Android application involves several steps. You will need to set up a new Android project, design the user interface, and write the logic to calculate BMI. Here's a basic implementation using Android Studio with Kotlin.

**Step 1: Set Up a New Android Project**

1. **Open Android Studio** and create a new project.
2. **Choose a project template**: Select "Empty Activity".
3. **Configure your project**: Name it "BMICalculator", set the package name, and choose Kotlin as the language.

**Step 2: Design the User Interface**

In res/layout/activity\_main.xml, design the UI to take weight and height inputs and display the BMI result.

<?xml version="1.0" encoding="utf-8"?>

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

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp"

tools:context=".MainActivity">

<EditText

android:id="@+id/weightInput"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Enter weight in kg"

android:inputType="numberDecimal" />

<EditText

android:id="@+id/heightInput"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Enter height in meters"

android:inputType="numberDecimal"

android:layout\_marginTop="16dp" />

<Button

android:id="@+id/calculateButton"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Calculate BMI"

android:layout\_marginTop="16dp" />

<TextView

android:id="@+id/bmiResult"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text=""

android:layout\_marginTop="16dp"

android:textSize="18sp" />

<TextView

android:id="@+id/bmiCategory"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text=""

android:layout\_marginTop="8dp"

android:textSize="18sp" />

</LinearLayout>

**Step 3: Write the Logic in MainActivity**

In MainActivity.kt, implement the logic to calculate the BMI when the button is clicked.

package com.example.bmicalculator

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 weightInput = findViewById<EditText>(R.id.weightInput)

val heightInput = findViewById<EditText>(R.id.heightInput)

val calculateButton = findViewById<Button>(R.id.calculateButton)

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

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

calculateButton.setOnClickListener {

val weight = weightInput.text.toString().toFloatOrNull()

val height = heightInput.text.toString().toFloatOrNull()

if (weight != null && height != null && height != 0f) {

val bmi = calculateBMI(weight, height)

bmiResult.text = "Your BMI is: %.2f".format(bmi)

bmiCategory.text = "Category: ${bmiCategory(bmi)}"

} else {

bmiResult.text = "Please enter valid weight and height"

bmiCategory.text = ""

}

}

}

private fun calculateBMI(weight: Float, height: Float): Float {

return weight / (height \* height)

}

private fun bmiCategory(bmi: Float): String {

return when {

bmi < 18.5 -> "Underweight"

bmi < 24.9 -> "Normal weight"

bmi < 29.9 -> "Overweight"

else -> "Obesity"

}

}

}

**Step 4: Run the App**

1. **Connect your Android device** or start an emulator.
2. **Run the app** from Android Studio.

**Explanation**

* **XML Layout**: This file defines the user interface with input fields for weight and height, a button to calculate BMI, and text views to display the results.
* **MainActivity**: This Kotlin file handles the logic. It reads the user inputs, calculates the BMI when the button is clicked, and updates the UI with the result and category.

+------------------------+

| Enter weight in kg |

| [ ] |

+------------------------+

| Enter height in meters |

| [ ] |

+------------------------+

| [ Calculate BMI ] |

+------------------------+

| Your BMI is: 22.86 |

| Category: Normal weight |

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