

# Construção de app Exemplo

## parte 2 - Codificação

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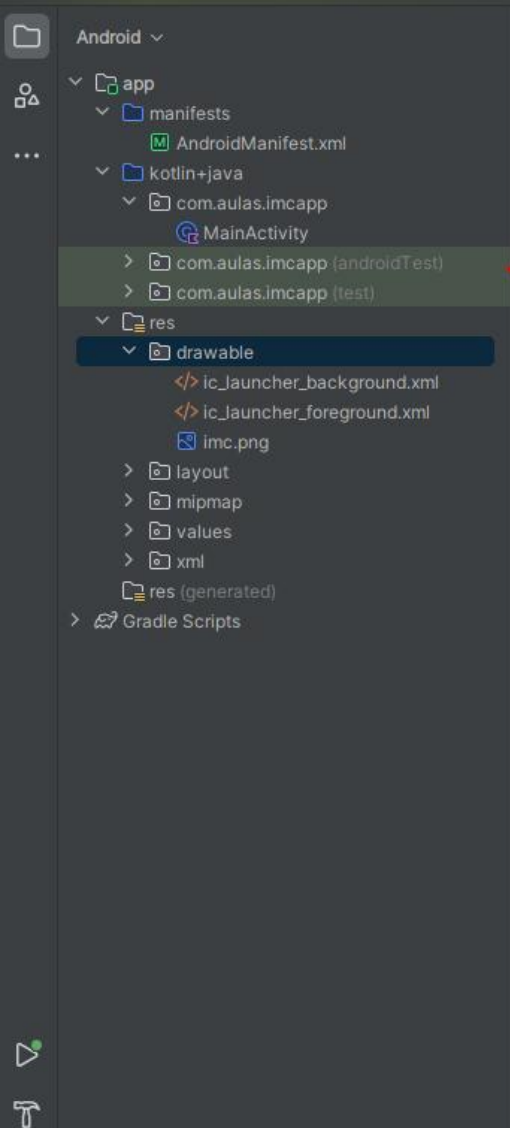


# Escrevendo código em Kotlin



# MainActivity.kt





```
1 package com.aulas.imcapp
2
3 > import ...
8
9 class MainActivity : AppCompatActivity() { 2 Usages
10
11
12
13 override fun onCreate(savedInstanceState: Bundle?) {
14     super.onCreate(savedInstanceState)
15     enableEdgeToEdge()
16     setContentView(R.layout.activity_main)
17     ViewCompat.setOnApplyWindowInsetsListener(view = findViewById(id = R.id.main)) { v, insets ->
18         val systemBars = insets.getInsets(typeMask = WindowInsetsCompat.Type.systemBars())
19         v.setPadding(left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
20         insets
21     }
22 }
23 }
```



Project structure view (left sidebar):

- Android
  - app
    - manifests
      - AndroidManifest.xml
    - kotlin+java
      - com.aulas.imcapp
        - MainActivity
        - com.aulas.imcapp (androidTest)
        - com.aulas.imcapp (test)
    - res
      - drawable
        - ic\_launcher\_background.xml
        - ic\_launcher\_foreground.xml
        - imc.png
      - layout
      - mipmap
      - values
      - xml
      - res (generated)
    - Gradle Scripts

```
activity_main.xml MainActivity.kt
1 package com.aulas.imcapp
2
3 import ...
10
11 class MainActivity : AppCompatActivity() { 2 Usages
12
13     private lateinit var btnCalcular : Button
14     private lateinit var txtNome: EditText
15     private lateinit var txtPeso: EditText
16     private lateinit var txtAltura: EditText
17
18
19     override fun onCreate(savedInstanceState: Bundle?) {
20         super.onCreate(savedInstanceState)
21         enableEdgeToEdge()
22         setContentView(R.layout.activity_main)
23         ViewCompat.setOnApplyWindowInsetsListener( view = findViewById( id = R.id.main)) { v, insets ->
24             val systemBars = insets.getInsets( typeMask = WindowInsetsCompat.Type.systemBars())
25             v.setPadding( left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
26             insets
27         }
28     }
29 }
```



```
1 package com.aulas.imcapp
2
3 > import ...
10
11 </> class MainActivity : AppCompatActivity() { 2 Usages
12
13     private lateinit var btnCalcular : Button 1 Usage
14     private lateinit var txtNome: EditText 1 Usage
15     private lateinit var txtPeso: EditText 1 Usage
16     private lateinit var txtAltura: EditText 1 Usage
17
18
19     override fun onCreate(savedInstanceState: Bundle?) {
20         super.onCreate(savedInstanceState)
21         enableEdgeToEdge()
22         setContentView(R.layout.activity_main)
23         ViewCompat.setOnApplyWindowInsetsListener( view = findViewById( id = R.id.main)) { v, insets ->
24             val systemBars = insets.getInsets( typeMask = WindowInsetsCompat.Type.systemBars())
25             v.setPadding( left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
26             insets
27         }
28
29         btnCalcular = findViewById( id = R.id.btn_calcular)
30         txtNome = findViewById( id = R.id.txt_nome)
31         txtPeso = findViewById( id = R.id.txt_peso)
32         txtAltura = findViewById( id = R.id.txt_altura)
33     }
34 }
```



```
1 package com.aulas.imcapp
2
3 > import ...
4
5
6
7
8
9
10
11 <> class MainActivity : AppCompatActivity() { 2 Usages
12
13     private lateinit var btnCalcular : Button 1 Usage
14     private lateinit var txtNome: EditText 1 Usage
15     private lateinit var txtPeso: EditText 1 Usage
16     private lateinit var txtAltura: EditText 1 Usage
17
18
```

```
19 @ override fun onCreate(savedInstanceState: Bundle?) {
20     super.onCreate(savedInstanceState)
21     enableEdgeToEdge()
22     setContentView(R.layout.activity_main)
23     ViewCompat.setOnApplyWindowInsetsListener( view = findViewById( id = R.id.main)) { v, insets ->
24         val systemBars = insets.getInsets( typeMask = WindowInsetsCompat.Type.systemBars())
25         v.setPadding( left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
26         insets
27     }
28
29     btnCalcular = findViewById( id = R.id.btn_calcular)
30     txtNome = findViewById( id = R.id.txt_nome)
31     txtPeso = findViewById( id = R.id.txt_peso)
32     txtAltura = findViewById( id = R.id.txt_altura)
33 }
34 }
```

OnCreate



12 class MainActivity : AppCompatActivity() { 2 Usages

15 ^ v

```
19
20 override fun onCreate(savedInstanceState: Bundle?) {
21     super.onCreate(savedInstanceState)
22     enableEdgeToEdge()
23     setContentView(R.layout.activity_main)
24     ViewCompat.setOnApplyWindowInsetsListener( view = findViewById( id = R.id.main)) { v, insets ->
25         val systemBars = insets.getInsets( typeMask = WindowInsetsCompat.Type.systemBars())
26         v.setPadding( left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
27         insets
28     }
29 }
```

```
30 btnCalcular = findViewById( id = R.id.btn_calcular)
31 txtNome = findViewById( id = R.id.txt_nome)
32 txtPeso = findViewById( id = R.id.txt_peso)
33 txtAltura = findViewById( id = R.id.txt_altura)
34
```

```
35 //cria o evento onclick para o botão
36 btnCalcular.setOnClickListener {
37     //cria uma intent - chamada para outra activity --> IMC_Activity
38     val intent = Intent( packageContext = this, cls = IMC_Activity::class.java)
39     //recupera os valores dos componentes e atribui para variáveis
40     val nome = txtNome.text.toString()
41     val peso = txtPeso.text.toString()
42     val altura = txtAltura.text.toString()
43     //verifica se foram atribuídos valores
44     if (peso.isNotEmpty() && altura.isNotEmpty() && nome.isNotEmpty()){
45         intent.putExtra( name = "nome", value = nome)
46         intent.putExtra( name = "peso", value = peso.toDouble())
47         intent.putExtra( name = "altura", value = altura.toDouble())
48     }
49     startActivity(intent)
50 }
51
52 }
```





IMC\_Activity.kt



```

1 package com.aulas.imcapp
2
3 > import ...
11
12 class IMC_Activity : AppCompatActivity() { 3 Usages
13
14     private lateinit var txtNomeInformado: TextView 2 Usages
15     private lateinit var txtPesoInformado: TextView 2 Usages
16     private lateinit var txtAlturaInformada: TextView 2 Usages
17     private lateinit var txtIMC: TextView 1 Usage
18     private lateinit var txtResultado: TextView 1 Usage
19     private lateinit var imgClassificacao: ImageView 1 Usage
20     private lateinit var btnVoltar: Button 2 Usages
21
22
23
24     override fun onCreate(savedInstanceState: Bundle?) {
25         super.onCreate(savedInstanceState)
26         enableEdgeToEdge()
27         setContentView(R.layout.activity_imc)
28         ViewCompat.setOnApplyWindowInsetsListener(view = findViewById(id = R.id.main)) { v, insets ->
29             val systemBars = insets.getInsets(typeMask = WindowInsetsCompat.Type.systemBars())
30             v.setPadding(left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
31             insets
32         }
33
34         txtNomeInformado = findViewById(id = R.id.txt_nomeinformado)
35         txtPesoInformado = findViewById(id = R.id.txt_pesoinformado)
36         txtAlturaInformada = findViewById(id = R.id.txt_alturainformada)
37         txtIMC = findViewById(id = R.id.txt_imc)
38         txtResultado = findViewById(id = R.id.txt_resultado)
39         imgClassificacao = findViewById(id = R.id.imgClassificacao)
40         btnVoltar = findViewById(id = R.id.btnVoltar)
41         //atribuo o evento click ao botão voltar
42         btnVoltar.setOnClickListener { finish() }

```



```

override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    enableEdgeToEdge()
    setContentView(R.layout.activity_imc)
    ViewCompat.setOnApplyWindowInsetsListener(view = findViewById(id = R.id.main)) { v, insets ->
        val systemBars = insets.getInsets(typeMask = WindowInsetsCompat.Type.systemBars())
        v.setPadding(left = systemBars.left, top = systemBars.top, right = systemBars.right, bottom = systemBars.bottom)
        insets
    }

    txtNomeInformado = findViewById(id = R.id.txt_nomeinformado)
    txtPesoInformado = findViewById(id = R.id.txt_pesoinformado)
    txtAlturaInformada = findViewById(id = R.id.txt_alturainformada)
    txtIMC = findViewById(id = R.id.txt_imc)
    txtResultado = findViewById(id = R.id.txt_resultado)
    imgClassificacao = findViewById(id = R.id.imgClassificacao)
    btnVoltar = findViewById(id = R.id.btnVoltar)
    //atribuo o evento click ao botão voltar
    btnVoltar.setOnClickListener { finish() }

    //recuperar os valores
    val bundle = intent.extras
    if (bundle != null){
        val nome = bundle.getString(key = "nome")
        val peso = bundle.getDouble(key = "peso")
        val altura = bundle.getDouble(key = "altura")
        //exibo os valores informados
        txtNomeInformado.text = "Nome: $nome"
        txtPesoInformado.text = "Peso: $peso Kg"
        txtAlturaInformada.text = "Altura: $altura m"
    }
}

```



```
12 class IMC_Activity : AppCompatActivity() { 3 Usages
24 override fun onCreate(savedInstanceState: Bundle?) {
37     txtIMC = findViewById( id = R.id.txt_imc)
38     txtResultado = findViewById( id = R.id.txt_resultado)
39     imgClassificacao = findViewById( id = R.id.imgClassificacao)
40     btnVoltar = findViewById( id = R.id.btnVoltar)
41     //atribuo o evento click ao botão voltar
42     btnVoltar.setOnClickListener { finish() }
43
44     //recuperar os valores
45     val bundle = intent.extras
46     if (bundle != null){
47         val nome = bundle.getString( key = "nome")
48         val peso = bundle.getDouble( key = "peso")
49         val altura = bundle.getDouble( key = "altura")
50         //exibo os valores informados
51         txtNomeInformado.text = "Nome: $nome"
52         txtPesoInformado.text = "Peso: $peso Kg"
53         txtAlturaInformada.text = "Altura: $altura m"
54
55         //exibo o IMC
56         val imc = peso / (altura * altura)
57         txtIMC.text = String.format("IMC: %.2f", imc)
58
59     }
60
61 }
62
63 }
64 }
```



```

12  class IMC_Activity : AppCompatActivity() { 3 Usages
24      override fun onCreate(savedInstanceState: Bundle?) {
25          val bundle = savedInstanceState
26          if (bundle != null){
27              val nome = bundle.getString( key = "nome")
28              val peso = bundle.getDouble( key = "peso")
29              val altura = bundle.getDouble( key = "altura")
30              //exibo os valores informados
31              txtNomeInformado.text = "Nome: $nome"
32              txtPesoInformado.text = "Peso: $peso Kg"
33              txtAlturaInformada.text = "Altura: $altura m"
34
35              //exibo o IMC
36              val imc = peso / (altura * altura)
37              txtIMC.text = String.format("IMC: %.2f",imc)
38
39              //exibo a classificação
40              if (imc < 20){
41                  txtResultado.text = "Magro"
42                  imgClassificacao.setImageResource(R.drawable.magro)
43
44              } else if (imc <= 25 ){
45                  txtResultado.text = "Peso Normal"
46                  imgClassificacao.setImageResource(R.drawable.normal)
47              } else if (imc <= 30){
48                  txtResultado.text = "Sobrepeso"
49                  imgClassificacao.setImageResource(R.drawable.sobrepeso)
50              } else
51              {
52                  txtResultado.text = "Obeso"
53                  imgClassificacao.setImageResource(R.drawable.obeso)
54              }
55          }
56      }
57  }

```



```
13      class MainActivity : AppCompatActivity() { 2 Usages
21          override fun onCreate(savedInstanceState: Bundle?) {
31              btnCalcular = findViewById( id = R.id.btn_calcular)
32              txtNome = findViewById( id = R.id.txt_nome)
33              txtPeso = findViewById( id = R.id.txt_peso)
34              txtAltura = findViewById( id = R.id.txt_altura)
35
36              //cria o evento onclick para o botão
37              btnCalcular.setOnClickListener {
38                  //cria uma intent - chamada para outra activity --> IMC_Activity
39                  val intent = Intent( packageContext = this, cls = IMC_Activity::class.java)
40                  //recupera os valores dos componentes e atribui para variáveis
41                  val nome = txtNome.text.toString()
42                  val peso = txtPeso.text.toString()
43                  val altura = txtAltura.text.toString()
44                  //verifica se foram atribuidos valores
45                  if (peso.isNotEmpty() && altura.isNotEmpty() && nome.isNotEmpty()){
46                      intent.putExtra( name = "nome", value = nome)
47                      intent.putExtra( name = "peso", value = peso.toDouble())
48                      intent.putExtra( name = "altura", value = altura.toDouble())
49                  }
50                  startActivity(intent)
51              }
52          }
53      }
54      override fun onResume() {
55          super.onResume()
56          if (::txtNome.isInitialized) txtNome.text.clear()
57          if (::txtPeso.isInitialized) txtPeso.text.clear()
58          if (::txtAltura.isInitialized) txtAltura.text.clear()
59          txtNome.requestFocus()
60      }
61  }
```



