



**SOLUTION MICRO-QUIZ IN MOBILE APPLICATIONS**

**1 point on a very very very... clean exam paper**

**Parte 01 (QCM)**

Check the correct answer(s) for each question [A wrong choice will reduce the points for that question]

|                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Q1.</b> For a good display of a button, we use:</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> A virtual unit</li><li><input type="checkbox"/> A physical unit</li><li><input type="checkbox"/> Both virtual and physical units</li><li><input type="checkbox"/> None of these answers</li></ul>        | <p><b>Q2.</b> The <b>res</b> folder contains:</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Images</li><li><input checked="" type="checkbox"/> Layouts</li><li><input checked="" type="checkbox"/> Resources</li><li><input type="checkbox"/> None of these answers</li></ul>                                                         |
| <p><b>Q3.</b> The activity lifecycle is :</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Increases resource usage</li><li><input type="checkbox"/> XML code lines</li><li><input checked="" type="checkbox"/> Composed of 7 main stages (methods)</li><li><input type="checkbox"/> None of these answers</li></ul>       | <p><b>Q4.</b> onCreate is in a file :</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Java</li><li><input checked="" type="checkbox"/> Kotlin</li><li><input type="checkbox"/> XML</li><li><input type="checkbox"/> None of these files</li></ul>                                                                                       |
| <p><b>Q5.</b> An authentication page is displayed using code :</p> <ul style="list-style-type: none"><li><input type="checkbox"/> XML only</li><li><input type="checkbox"/> Kotlin only</li><li><input checked="" type="checkbox"/> XML and Kotlin</li><li><input type="checkbox"/> Java only</li></ul>                                      | <p><b>Q6.</b> The pixel is a unit :</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Physical</li><li><input checked="" type="checkbox"/> Virtual</li><li><input checked="" type="checkbox"/> Does not help in building a fluid interface</li><li><input checked="" type="checkbox"/> Its size changes depending on the device</li></ul> |
| <p><b>Q7.</b> In layout_height, you can use :</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> match_parent</li><li><input checked="" type="checkbox"/> wrap_content</li><li><input checked="" type="checkbox"/> 20 dp</li><li><input type="checkbox"/> None of these answers</li></ul>                         | <p><b>Q8.</b> For an image of (1024 × 768), the number of PPI on a 22-inch screen is:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> 56</li><li><input type="checkbox"/> 57</li><li><input checked="" type="checkbox"/> 58</li><li><input type="checkbox"/> 59</li></ul>                                                                          |
| <p><b>Q9.</b> The mandatory attribute in the LinearLayout container is :</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> layout_width</li><li><input checked="" type="checkbox"/> layout_height</li><li><input type="checkbox"/> Text</li><li><input type="checkbox"/> Orientation</li></ul>                   | <p><b>Q10.</b> By default, MainActivity is an extension of type:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> XML</li><li><input type="checkbox"/> Layout</li><li><input type="checkbox"/> XML and Layout</li><li><input checked="" type="checkbox"/> None of these answers</li></ul>                                                           |
| <p><b>Q11.</b> For views in a ConstraintLayout, you must at minimum link :</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Top and left</li><li><input checked="" type="checkbox"/> Bottom and right</li><li><input type="checkbox"/> Left and bottom</li><li><input type="checkbox"/> Right and top</li></ul> | <p><b>Q12.</b> A default activity_main file has the extension:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Kotlin</li><li><input type="checkbox"/> XML and Kotlin</li><li><input checked="" type="checkbox"/> XML</li><li><input type="checkbox"/> None of these answers</li></ul>                                                             |

## Parte 02 (Test General Understanding)

Q1. In Android Studio, the mode that allows you to display both code and design is:

SPLIT

Q2. A client asks you to develop a native mobile application for an iOS system. Which programming language will you use? In addition, which SDK?

Language → Objective C et Swift

SDK → Xcode

Q3. Is using a constant value for sizes in the interface a good practice?

☐ Yes

Why? Propose solutions!

Screens have different sizes and resolutions

☒ No

Use adaptive units (dp, sp, ...)

Q4. A screen with the following dimensions [Length (1024px and 13.65 inches)] [Height (768px and 10.25 inches)]. **Note : Write the mathematical operation with the result.**

– Number of centimeters in the length =  $13,65 \times 2,54 = 34,67$  and the Height =  $10,25 \times 2,54 = 26,03$

– The resolution of the length =  $1024/13,65 = 75,01$  and the height =  $768/10,25 = 74,92$

– The number of inches of this screen (diagonal)  $\sqrt{13,65^2 + 10,25^2} = 17,07$

Q5. After development, users with low visual mobility encountered problems when trying to increase the font size, and the landscape display is not correct. In your opinion, why?

Because the app not support accessibility, features (like scalable text with sp) or different screen orientations (landscape handling).

Q6. List 5 common attributes of an ImageView in XML in an Android application.

src

layout\_width

layout\_height

contentDescription

scaleType

Q7. Why does an image with a fixed size in pixels appear larger on screen 1 and smaller on screen 2?

Because different screens have different densities (DPI/PPI).

On a low-density screen → 1 pixel is physically larger → image looks bigger

On a high-density screen → 1 pixel is smaller → image looks smaller

```

class MainActivity : ComponentActivity() {
    @SuppressWarnings("MissingInflatedId", "ResourceType", "ClickableViewAccessibility")
    override fun empty 01 (savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        enableEdgeToEdge()
        setContentView(empty 02.splash)
        val logo = findViewById<Button>(R.id.logo) error 01
        val btEnter = findViewById<ImageView>(R.id.Enter) Error 02
        val fadeIn = AnimationUtils.loadAnimation(this, R.anim.fade_in)
        logo.startAnimation(Empty 03)
        Empty 04 {
            val intent = Intent(this, FirstPage::class.java)
            Empty 05
            Toast.makeText(this, "Click détecté!", Toast.LENGTH_SHORT).show()
        }
        btEnter.setOnLongClickListener {
            Toast.makeText(applicationContext, "Clic long détecté", Toast.LENGTH_SHORT).show()
            true
        }
    }
    override fun onStart() {
        super.onStart()
        Toast.makeText(this, "onCreate", Toast.LENGTH_SHORT).show() Error 03
    }
}

```

Fill in the table below

| Type     | Response                   |
|----------|----------------------------|
| Empty 01 | onCreate                   |
| Empty 02 | R.layout                   |
| Empty 03 | fadeIn                     |
| Empty 04 | btEnter.setOnClickListener |
| Empty 05 | startActivity(intent)      |
| Error 01 | ImageView                  |
| Error 02 | Button                     |
| Error 03 | onStart                    |