



Лабораторийн ажил 3

Unit 2: Display lists and use Material Design

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PATHWAY 1: More Kotlin fundamentals

Quiz

1. Which of the following is a valid way to define a data class in Kotlin?
 - a. `data class Person(val name: String, val age: Int)`
 - b. `class Person(val name: String, val age: Int): data`
 - c. `class Person(val name: String, val age: Int)`
 - d. `data class Person{val name: String, val age: Int}`
2. When using a sealed class, all direct subclasses must be in the same package.
 - a. True
 - b. false
3. When using generics, the generic data type goes inside ____.
 - a. []
 - b. {}
 - c. ()
 - d. <>
4. A(n) ____ class is useful when you have a fixed set of values.
 - a. enum
 - b. sealed
 - c. data
 - d. inherited
5. To create a list object that has the ability to change its size, you would call ____.
 - a. `modifiableListOf()`
 - b. `immutableListOf()`
 - c. `listOf()`
 - d. `mutableListOf()`
6. Which of the following are higher-order functions?
 - a. `map`
 - b. `arrangeBy`
 - c. `filter`

- d. `forEach`
7. Given the following line of code, which of the following commands will print Blue?
(Hint: If you are not sure, try running the code in the Kotlin Playground.)
`val colors = listOf("Red", "Green", "Blue")`
- a. `println(colors[2])`
 - b. `println(colors.get(2))`
 - c. `println(colors.contains(2))`
 - d. `println(colors.getOrElse(index = 2, defaultValue = 10))`
8. The programming concept of a class that has only one instance is called a ____.
- a. Uniqueness
 - b. **Singleton**
 - c. Mono-object
 - d. Lambda
9. Which of the following statements is true regarding sets and maps?
- a. **A set must contain distinct values and a map's keys must be distinct.**
 - b. A set must contain distinct values and a map's keys can contain duplicates.
 - c. A set can contain duplicate values and a map's values can contain duplicate values.
 - d. A set can contain duplicate values and a map's keys must be distinct.
10. If you have a variable named `records`, which is a collection, to determine the number of items it contains, you can call ____.
- a. `records.length`
 - b. `records.quantity`
 - c. `len(records)`
 - d. **`records.size`**

PATHWAY 2: Add a button to an app

Quiz

1. Adaptive launcher icons for Android apps consist of a foreground and background vector drawable.
 - a. True
 - b. False
2. When building a UI that requires a scrolling list with a variable number of items, which Composable should you use?
 - a. Column
 - b. Row
 - c. LazyColumn
 - d. Card
3. What file type is used for the launcher icon foreground and background vectors?
 - a. .txt
 - b. .jpg
 - c. .png
 - d. .xml
4. Which Composable should you use to create a vertically scrollable grid with an undetermined number of items?
 - a. LazyColumn
 - b. LazyVerticalGrid
 - c. LazyHorizontalGrid
 - d. Row
5. The Column composable is not a good option for a list of items of unknown quantity because ____.
 - a. It can only hold a small, finite number of predefined items
 - b. It arranges items vertically
 - c. It provides scrolling by default without any additional code
 - d. It can add content on demand

6. The ____ method is used to add content to a LazyColumn Composable.
 - a. painterResource()
 - b. Modifier.padding()
 - c. items()
 - d. onCreate()
7. Which Composable arranges items horizontally?
 - a. Column
 - b. Card
 - c. Image
 - d. Row
8. Which Composable arranges items vertically?
 - a. Column
 - b. Card
 - c. Image
 - d. Row

PATHWAY 3: Interacting with UI and state

Quiz

1. Animations in your Android app can:
 - a. Add visual cues about what's going on in your app.
 - b. Add a polished look to your app.
 - c. Help the user see what changed.
 - d. All of the above.
2. Spring animation is based on:
 - a. Start and end values over the specified duration.
 - b. Damping ratio and stiffness.
 - c. Snapshot values specified at different timestamps.
 - d. Interpolation between two keyframe values.
3. Spring animation is a physics-based animation driven by spring force.
 - a. True

- b. False
4. In the Material theming, the ____ color is the color displayed most frequently across your app's screens and components.
- a. **primary**
 - b. secondary
 - c. surface
 - d. background
5. The following file is used to define shapes of components in Compose.
- a. Theme.kt
 - b. Color.kt
 - c. **Shape.kt**
 - d. Colors.kt
6. You can only have one @Preview composable
- a. True
 - b. **False**
7. A hex color code starts with a pound (#) character, and is followed by six letters and/or numbers that represent the red, green, and blue (RGB) components of that color.
- a. **True**
 - b. False
8. The ____ file is the file that holds all the information about the theme of the app which is defined through color, shape, and typography.
- a. **Theme.kt**
 - b. Color.kt
 - c. Shape.kt
 - d. Colors.kt
9. ____ creates contrast between the Card and the background by adding a shadow to make the app look more realistic and visually interesting?
- a. **Elevation**
 - b. Shape
 - c. Color
 - d. Theme

10. What are reasons that someone may use Dark Theme on their device?
- a. It can reduce power usage by a significant amount (depending on the device's screen technology).
 - b. It improves visibility for users with low vision and those who are sensitive to bright light.
 - c. It makes it easier for anyone to use a device in a low-light environment.
 - d. All of the above.
11. TalkBack allows a user to navigate an app using switches instead of the touchscreen.
- a. True
 - b. False
12. Which attribute allows TalkBack to speak a meaningful representation of an image or icon?
- a. elevation
 - b. shape
 - c. contentDescription
 - d. style