



UNIVERSITI MALAYSIA TERENGGANU

FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS

[CSM3123]

NATIVE MOBILE PROGRAMING

(GROUP 1)

LAB REPORT 3

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[BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH HONOURS]

SEMESTER I 2023/2024

Task 1

Follow this link for the instructions:

<https://developer.android.com/courses/pathways/android-basics-compose-unit-2-pathway-1>

Output for Activity 2

Use if/else statement to express
condition Red color

```
Stop
```

```
Slow
```

Yellow color

Green color

```
Go
```

```
Invalid traffic-light color
```

Black color

Use a when statement for mutiple branches

```
Slow
```

```
x is a prime number between 1 and 10.
```

Write more complex condition in a **when** statement

Output for Activity 3

```
Sandra Oh  
null
```

Use nullable variable

nullable Int value

```
10  
null
```

```
The number of characters in your favorite actor's name is 9.
```

Target platform: JVM Running on:

Use the ?: Elvis operator

Output for Activity 4

```
Smart device is turned on.  
Smart device is turned off.
```

Define class methods

Define class properties

```
Device name is: Android TV  
Smart device is turned on.  
Smart device is turned off.
```

```
Android TV is turned on. Speaker volume is set to 2 and channel number is set to 1.  
Google Light turned on. The brightness level is 2.
```



Target platform: JVM Running on kotlin v. 1.9.10

Exercise

Output for Activity 5

```
5 quarters  
Have a treat!  
Have a treat!  
Have a treat!  
Have a treat!  
No treats!
```

Use function types and lambda expressions in Kotlin

Output for Activity 6

```
You have 51 notifications.  
Your phone is blowing up! You have 99+ notifications.
```

Target platform:

Mobile notifications

Movie-ticket price

```
The movie ticket price for a person aged 5 is $15.  
The movie ticket price for a person aged 28 is $25.  
The movie ticket price for a person aged 87 is $20.
```

Target platform:

```
27.0 degrees Celsius is 80.60 degrees Fahrenheit.  
350.0 degrees Kelvin is 76.85 degrees Celsius.  
10.0 degrees Fahrenheit is 260.93 degrees Kelvin.
```

Target platform

Temperature converter

Song catalog

```
We Don't Talk About Bruno, performed by Encanto Cast, was released in 2022.  
true
```

Target platform: JVM Rur

```

Name: Amanda
Age: 33
Likes to play tennis. Doesn't have a referrer.

Name: Atiqah
Age: 28
Likes to climb. Has a referrer named Amanda, who likes to play tennis.

```

Target platform: JVM Running on Kotlin v. 1.9.10

Internet profile

Foldable phones

```

The phone screen's light is off.
The phone screen's light is on.

```



```

Item A is sold at 5000.
Item B is sold at 3000.

```

Special auction

1. Put the github link inside report

Kotlin fundamentals  

Let's do a quick test! You must answer at least 7 questions correctly to pass this quiz.

[Return to pathway](#)

1. The following code will print "Divisible by 5" if number is equal to 25.

```

if (number % 10 == 0) {
    println("Divisible by 10")
} else if (number == 5) {
    println("Divisible by 5")
}

```

☐ true ☒ false Correct!

2. Which of the following conditions are satisfied when $x = 5$?

Choose as many answers as you wish.

☒ $x == 5$ Correct!

☒ $x \text{ in } 1..5$ Correct!

☒ $x \text{ is Int}$ Correct!

☐ $x \% 5$

3. Which is not a basic concept of object-oriented programming?

☐ Abstraction ☒ Readability Correct!

☐ Inheritance

☐ Polymorphism

2. Attached together quiz result

Polymorphism

4. Which are the four visibility modifiers in Kotlin?

- ☐ public, private, protected, abstract
- ☐ static, override, internal, external
- ☒ private, protected, public, internal Correct!
- ☐ public, protected, static, internal

5. The `__` keyword is used to call a method from the parent class.

- ☐ this
- ☒ super Correct!
- ☐ parent
- ☐ self

self

6. A(n) `__` defines properties or methods that a class needs to implement.

- ☐ Delegate
- ☐ Generic type
- ☒ interface Correct!
- ☐ Subclass

7. Which of the following is best represented by a nullable type?

- ☐ The number of followers (0 or more) in a social media app.
- ☒ An optional profile picture. Correct!
- ☐ A username that must be at least one character.
- ☐ A unique ID given to every user.

A unique ID given to every user.

8. The `__` operator allows you to call a method only if the object is non-null.

- ☐ .
- ☐ !.
- ☐ ?.
- ☒ ?. Correct!

9. Which is not true of functions in Kotlin?

- ☒ A function can be changed to another data type, and vice versa. Correct!
- ☐ A function can be returned from another function.
- ☐ A function can take another function as a parameter.
- ☐ A function has a data type, such as `(Int) -> Unit`.

A function has a data type, such as `(Int) -> Unit`.

10. A function literal is another name for a `__`

- ☐ Function type
- ☒ Lambda expression Correct!
- ☐ Function reference
- ☐ Trailing lambda

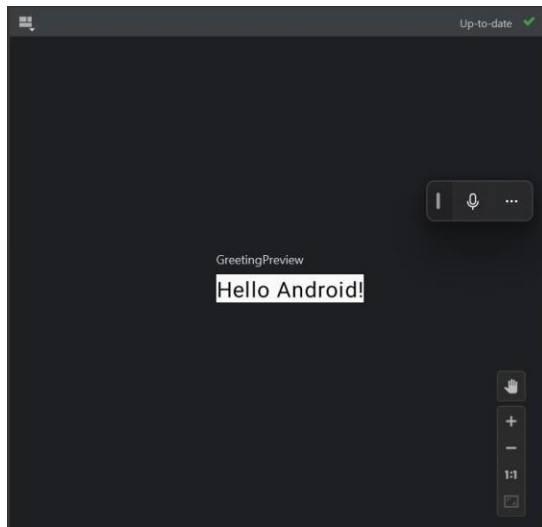
Results

You scored 10 out of 10. Congratulations! You have passed this quiz.

Task 2

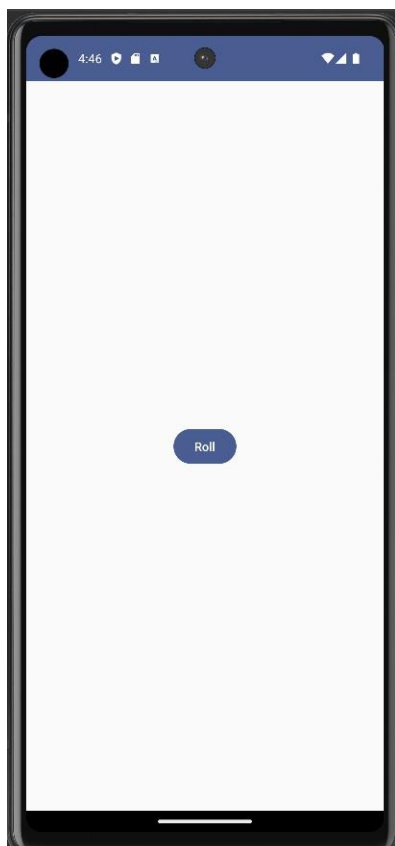
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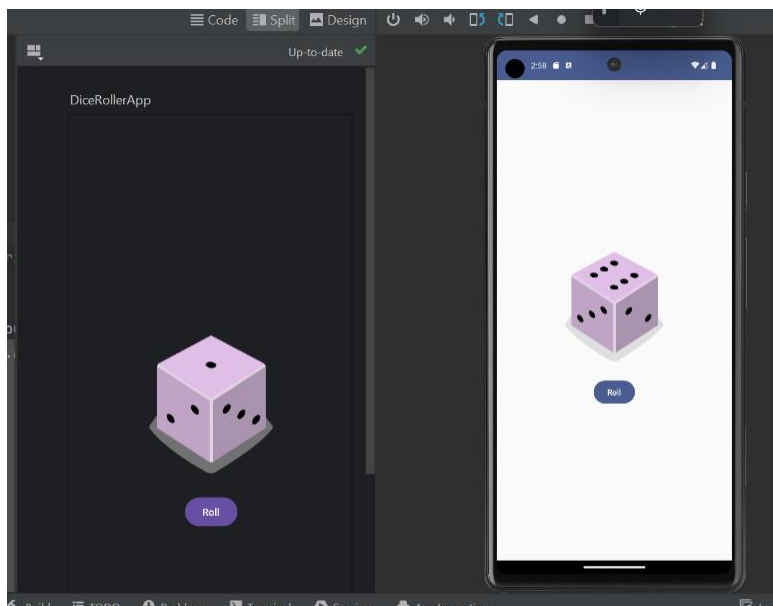
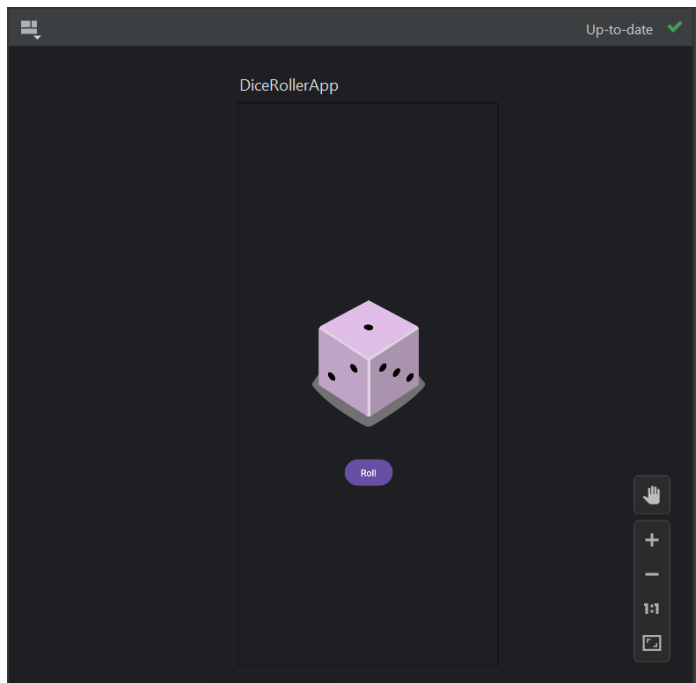
<https://developer.android.com/courses/pathways/android-basics-compose-unit-2-pathway-2>

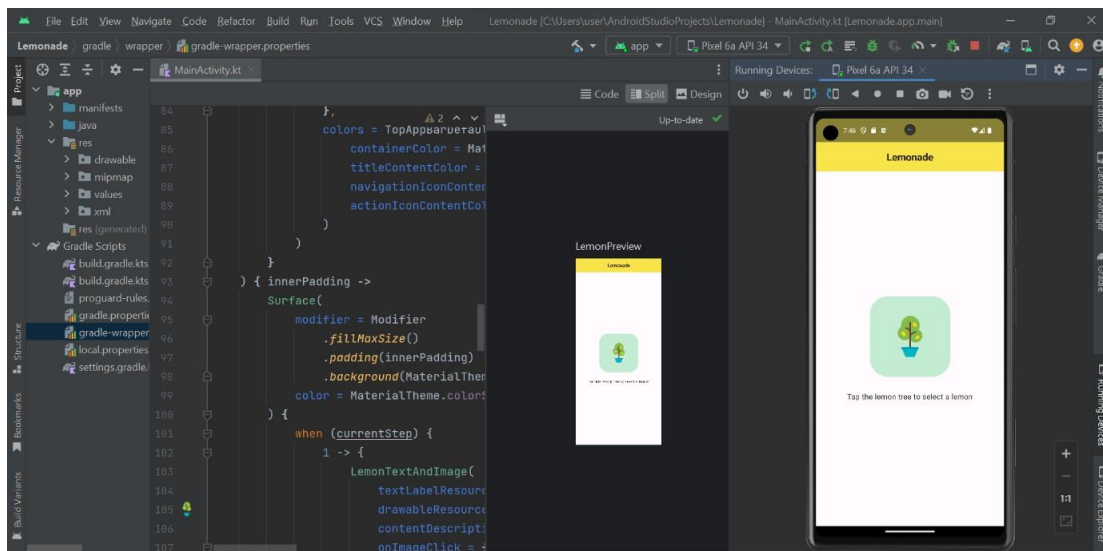
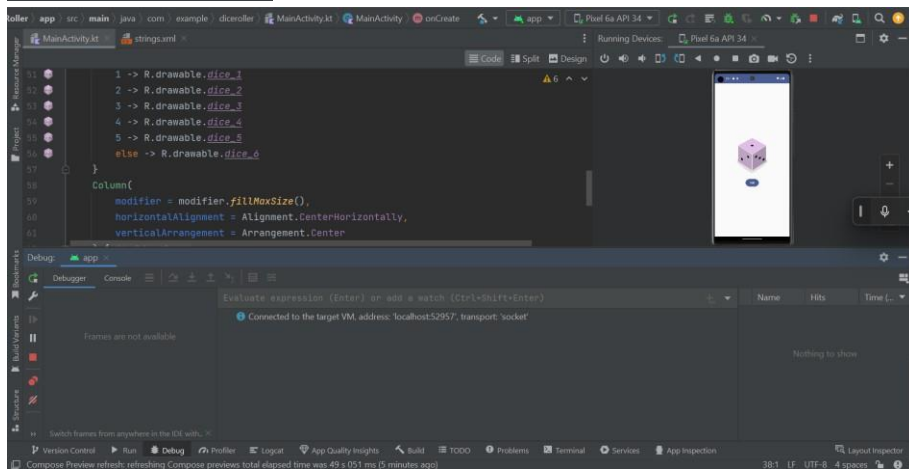


Output for Activity 2

Dice Roller app







Lemonde





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9

TRAINING > ANDROID BASICS WITH COMPOSE > BUILDING APP UI > ADD A BUTTON

Add a button to an app

Let's do a quick test! You must answer at least 5 questions correctly to pass this quiz.

Return to pathway



1. Use a `___` Composable to display an image

- ☐ Button
- ☐ Text
- ☒ Image Correct!
- ☐ Icon

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2. `Alignment.Center` centers UI components both horizontally and vertically.

☒ True Correct!

☐ False

3. Composable functions can store an object in memory using the `___` composable

☒ remember Correct!

☐ Column

☐ Modifier

☐ @Composable

4. The debugger allows you to inspect variables when code execution has been suspended.

☒ True Correct!

☐ False

☐ False

5. By using `___` values in a composable function, variables can be made into observables that schedule a recomposition when their value is changed.

- ☐ remember
- ☐ Modifier
- ☐ @Composable
- ☒ mutableStateOf Correct!

6. The `___` composable places its children in a vertical sequence.

- ☐ Row
- ☐ Box
- ☒ Column Correct!
- ☐ Modifier

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7. The `___` debugger feature allows you to navigate back up the call stack.

☐ Step over

☒ Step out Correct!

☐ Step into

☐ Resume program

Results

You scored 7 out of 7. Congratulations! You have passed this quiz.