SECJ3623 Mobile Application Programming

Topic 2 Exercise Sheet

2024/2025-2

Question 1

Declare the following variables in Dart:

a. String? firstName;

firstName : String

b. String lastName = "";

lastName : String

c. int num1= 0;

num1 : integer

d. double num1= 0.0;

num2 : double

e. var add1;

add1 : type not specified

f. bool nameState = false;

nameState : boolean

g. String? middleName;

middleName : String that can be null

Question 2

Using the variables from 1(a) - (b), print a string that includes your first and last name:

"Hello, my name is [firstName] [lastName]"

String firstName= "Leow";

String lastName= "Yan Hong";

print("Hello, my name is ${firstName} ${lastName}")

Question 3

a. int sum(int x, int y){

    return x+y;

    }

Create a function that accepts two parameters, both of which are type integer. The function should return the sum.

b. int sum({required int x, int y=10}){

    return x+y;

    }

    print(sum(x:5));

Modify the code you wrote in 3(a) so that you have a parameter that is required to be given a value by the user and another where a default value is set.

Question 4

Create a class called 'Car' where it contains three strings: carName, carModel and carColour. The, create a String function called registrationInfo that takes two parameters: numberPlate and userID. The function should print out the carName, carModel, carColour, numberPlate and userID. Hence, create an instance of the Car class.

Question 5

a.

String name(String firstName, String lastName, String? middleName){

    If(middleName==null){

        return "$firstName $lastName";

    }else{

        return "$firstName $middleName $lastName";

    }

}

Create a String function that takes three parameters called firstName, lastName and middleName (optional). If a middle name is given, print all three names. Otherwise, simply print the first and last name.

b.

```
String name(String firstName, String lastName, String? middleName){

        String result = "";

        If(middleName==null){

                for(int i=0;i<3;i++){

                result+="$firstName $lastName\n";

                }

        }else{

                for(int i=0;i<5;i++){

                result+="$firstName $middleName $lastName\n";

                }

        }

        return result;

}
```

By modifying the code in 5(a), create a loop that prints the names five times if a middle name is given and three times if a middle name is not given.

Question 6

a.

Using VS Code, create a new Flutter application (View -> Command Palette -> Flutter: New Project -> Application) and run the app.

b.
home: const MyHomePage(title: "Yan Hong's Home Page"),

Change the title of the home page from "Flutter Demo Home Page" to "[Your Name]'s First App".

c.
colorScheme: ColorScheme.fromSeed(seedColor: Colors.lightBlue),

Change the colour of the app from purple to blue.

Question 7

Determine whether the following syntax for a function is valid:

a.
No, it should be int getSum()

int getSum(int a, int b)

b.
No, it should be bool not boolean

boolean checkVal(required bool c)

c.
Yes

double getSum2({required int d, double e = 0.5})

d.

No, String showText([String? name = null, String name2 = 'Phantom'])

String showText(String name = null, String name2 = 'Phantom')

Question 8

Replicate the following output using the URL provided via NetworkImage().
Hint: Enable wifi.

Link: https://static.wikia.nocookie.net/reddwarf/images/6/69/Ainsley_
Harriott.jpg/revision/latest/scale-to-width-down/1000?cb=20180223100130

GitHub Link: https://github.com/YanHong0129/Execise_Topic2/tree/master