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;**

num1 : integer

## d. **double num2;**

num2 : double

## e. **var add1;**

add1 : type not specified

## f. **bool nameState;**

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]”

**print(“Hello, my name is $firstName $lastName”);**

# Question 3

## **Int add(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.

## **Int add({required int x, int y = 5}){**

## **return x + y;**

## **}**

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.

Class Car {

String carName;

String carModel;

String carColour;

Car(this.carName, this.carModel, this.carColour);

String registrationInfo (String numberPlate, String userID) {

String text = “Name: $carName. Model: $carModel. Colour: $carColour. Car Plate: $numberPlate. User ID: $userID.”

return text;

}

}

void main() {

Car car = Car(“Saga”, “Proton”, “Black”);

print(car.registrationInfo("ABC1234", "U001"));

}

# Question 5

## String nameFunc(String firstName, String middleName, String lastName) {

## String text;

## if (middleName == null) {

## text = “$firstName $lastName”;

## } else {

## text = “$firstName $middleName $lastName”;

## }

## return text;

## }

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.

## String nameFunc(String firstName, [String? middleName], String lastName) {

## String text = “ ”;

## if (middleName == null) {

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

## text += “$firstName $lastName\n”;

## }

## } else {

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

## text += “$firstName $middleName $lastName\n”;

## }

## }

## return text;

## }

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.

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

## c.

Change the colour of the app from purple to blue.

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# Question 7

Determine whether the following syntax for a function is valid:

## True

int getSum(int a, int b)

## False

boolean checkVal(required bool c)

## False

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

## True

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

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