Swinburne University of Technology

Object Oriented Programming (2022 S1)

Doubtfire Submission

Task 1.1P: Preparing for Object-Oriented Programming

Submitted By:
Vaissheenavi Prabakaran
103508183
2022/03/11 08:54

Tutor:
Jai Cornes

March 11, 2022

1.1P: Preparing for OOP – Answer Sheet

1. Explain the following terminal instructions:
    a. cd: To change the directory path, we use cd
    b. ls: ls is the list of content available in the directory
    c. pwd: pwd is the current directory that the computer is in

2. Consider the following kinds of information, and suggest the most appropriate data type to store or represent each:

Information	**Suggested Data Type**
A person's name	String
A person's age in years	Integer
A phone number	Integer
A temperature in Celsius	Float
The average age of a group of people	Integer/Float
Whether a person has eaten lunch	Boolean

3. Aside from the examples already given, come up with an example of information that could be stored as:

Data type	**Suggested Information**
String	A person's favorite food
Integer	A person's bank account number
Float	A person's height
Boolean	Whether a person has done their homework

4. Fill out the following table, evaluating the value of each expression and identifying the data type the value is most likely to be:

Expression	**Given**	**Value**	**Data Type**
5	5	5	Integer

`True`	`True`	True	Boolean
`a`	`a = 2.5`	2.5	Float
`1 + 2 * 3`	`1 + 2 * 3`	7	Integer
`a and False`	`a = True`	False	Boolean
`a or False`	`a = True`	True	Boolean
`a + b`	`a = 1` `b = 2`	3	Integer
`2 * a`	`a = 3`	6	Integer
`a * 2 + b`	`a = 1.5` `b = 2`	5	Integer
`a + 2 * b`	`a = 1.5` `b = 2`	5.5	Float

`(a + b) * c`	`a = 1`
	`b = 1`
	`c = 5`
		10	Integer

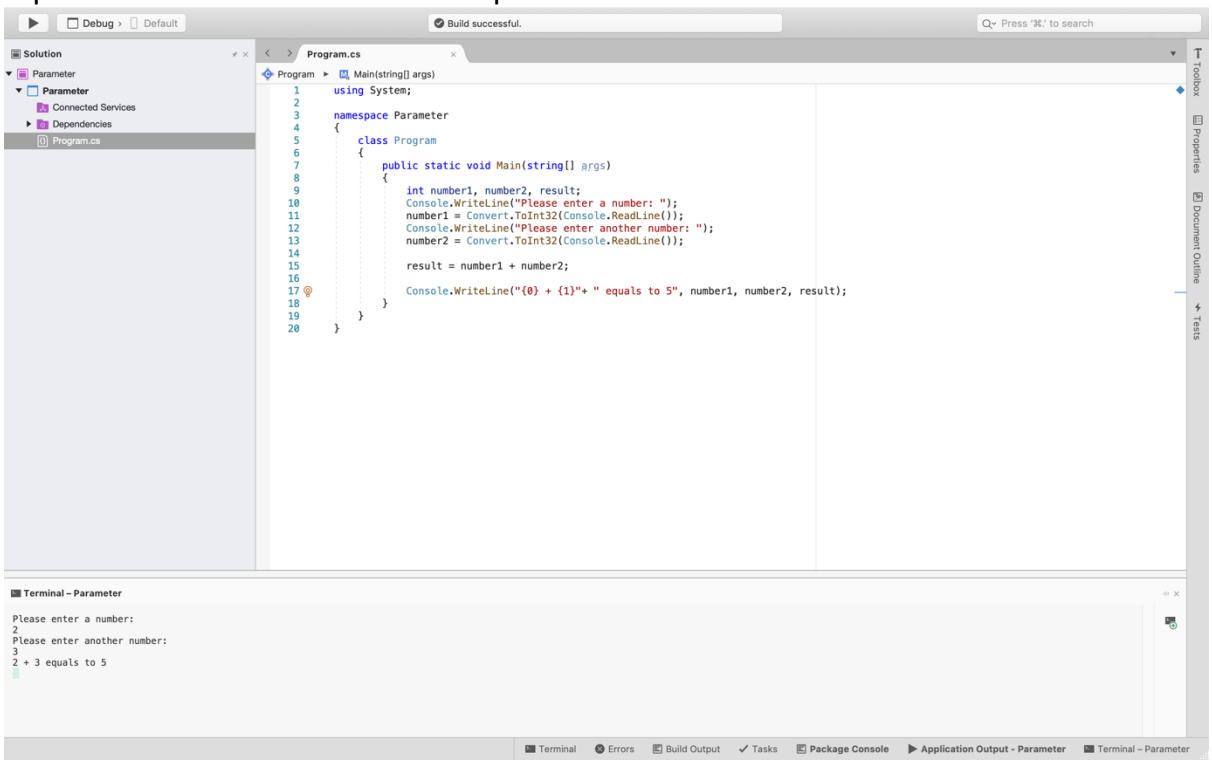
`"Fred" + " Smith"`	`"Fred" + " Smith"`	Fred Smith	String
`a + " Smith"`	`a = "Wilma"`	Wilma Smith	String

5. Explain the difference between **declaring** and **initialising** a variable.

The difference between the two is declaring means setting up and initialising means placing the value. For instance, if we say “declaring a variable”, it means that we are creating a variable while if we say “initialising a variable”, it means that we are putting the value in the variable.

6. Explain the term **parameter**. Write some code that demonstrates a simple of use of a parameter.

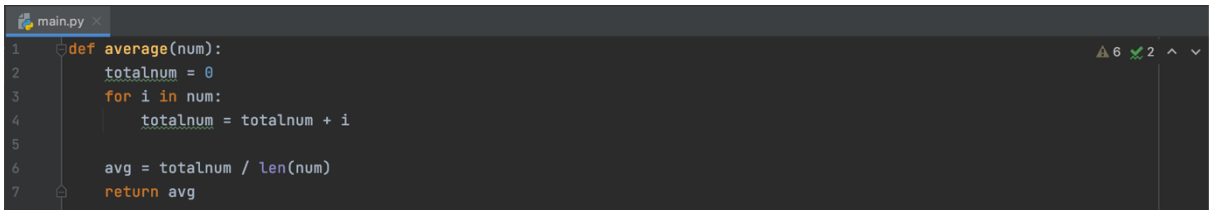
A parameter is a value that will be passed into the function.



7. Using an example, describe the term **scope**.

Scope defines how and where variables can be used and accessed.

8. In any procedural language you like, write a function called Average, which accepts an array of integers and returns the average of those integers.



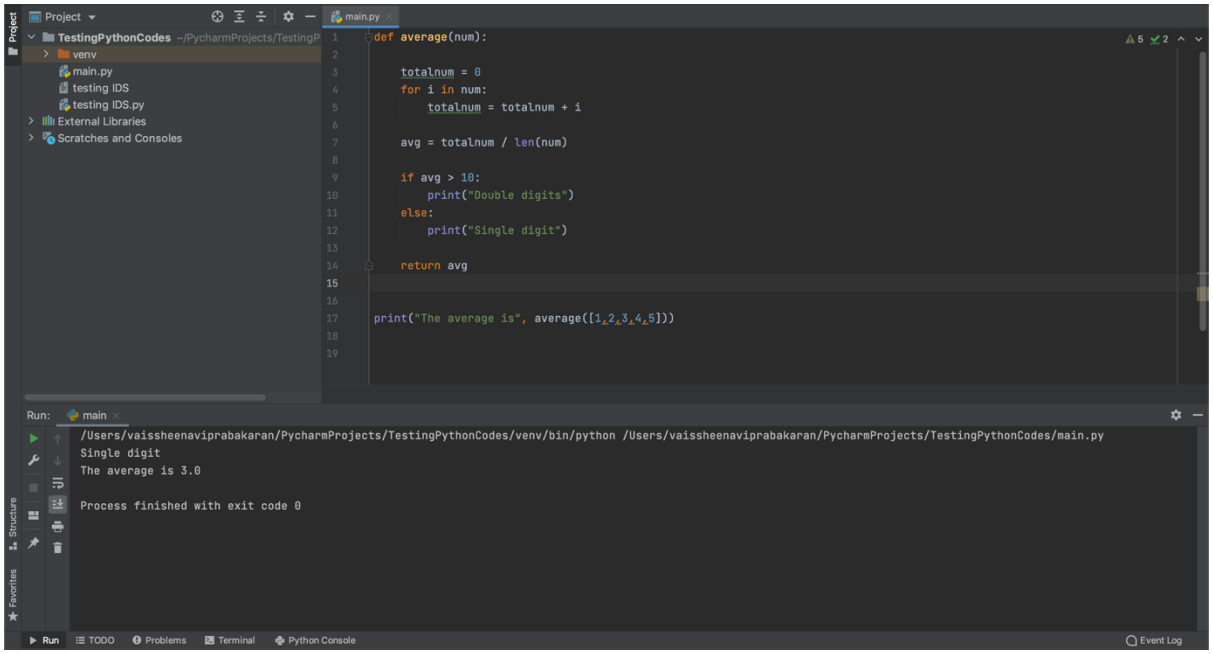
9. In the same language, write the code you would need to call that function and print out the result.

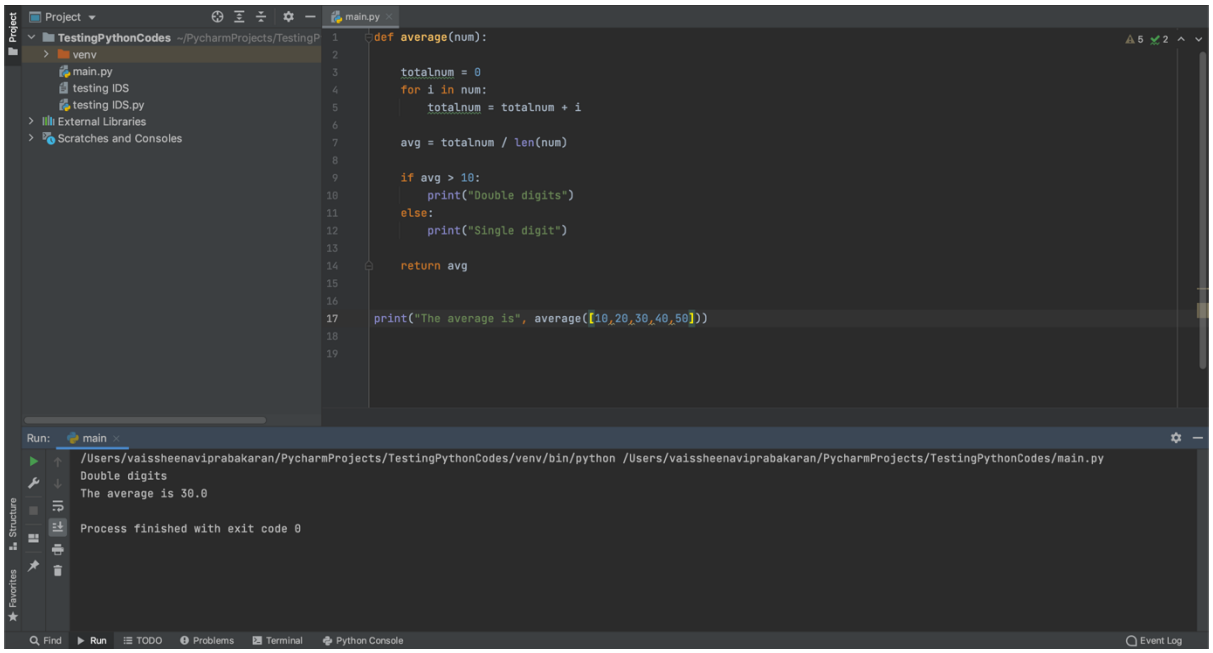
main.py

```
def average(num):
    totalnum = 0
    for i in num:
        totalnum = totalnum + i

    avg = totalnum / len(num)
    return avg

print("The average is", average([10,20,30,40,50]))
```

10. To the code from 9, add code to print the message “Double digits” if the average is above 10. Otherwise, print the message “Single digits”.

```python
def average(num):

    totalnum = 0
    for i in num:
        totalnum = totalnum + i

    avg = totalnum / len(num)

    if avg > 10:
        print("Double digits")
    else:
        print("Single digit")

    return avg


print("The average is", average([1,2,3,4,5]))
```




Project
TestingPythonCodes ~/PycharmProjects/TestingP
venv
main.py
testing IDS
testing IDS.py
External Libraries
Scratches and Consoles
main.py
def average(num):
totalnum = 0
for i in num:
totalnum = totalnum + i
avg = totalnum / len(num)
if avg > 10:
print("Double digits")
else:
print("Single digit")
return avg
print("The average is", average([10,20,30,40,50]))
Run:
main
/Users/vaissheenaviprabakaran/PycharmProjects/TestingPythonCodes/venv/bin/python /Users/vaissheenaviprabakaran/PycharmProjects/TestingPythonCodes/main.py
Double digits
The average is 30.0
Process finished with exit code 0
Find
Run
TODO
Problems
Terminal
Python Console
Event Log
Structure
Favorites