Python Basic Camp

Exercises Day 1

1 - Hello World	Create a new project and test the "print" function.
Instructions	Use the "print" function to output "Hello World!" print("Hello World!")
Expected output	Hello World!
Solution	`print("Hello World!")`

2.1 - Variables and operations	Print the total salaries
Instructions	1 employee of the sales department gets 1000 dollars. There are 12 employees in the department. Write a program that displays the total salaries of all employees, with the note: "Amount of employee salaries:". Use a variable called "employee_salary" to store the salary of one employee and another variable called "number_of_employees" to store the amount of employees.
Expected output	Amount of employee salaries: 12000
Solution	```employee_salary = 1000\nnumber_of_employees = 12\nprint("Amount of employee salaries:",\nemployee_salary*number_of_employees)```

2.2 - Variables and operations	Which is correct?
Instructions	Try out the following versions of the program: ● print(100*1024) ● print(80*1024) ● print((100-80)*1024) ● print(100-80*1024)
Expected output	Which one will print 20480?
Solution	The third option will print 20480

2.3 - Variables and operations	Print the total amount allocated
Instructions	There is a request for the purchase of computers and components for them: - 6 laptops for 55,480 dollars each; - 3 monitors for 21,830 dollars each; - 11 computer mice for 411 dollars each; - 5 keyboards for 290 dollars each. Calculate how much to allocate from the company's budget. Use 4 variables to store the prices of each of the components.
Expected output	Need to allocate: 404341
| Solution | ```python
#Prices of the components
laptop_price = 55480
monitor_price = 21830
mice_price = 411
keyboard_price = 290

#Calculation
total = laptop_price*6 + monitor_price*3 +
mice_price*11 + keyboard_price*5
print("Need to allocate:", total)
``` |

2.4 - Variables and operations	Write a program that calculates storage capabilities
Instructions	The company has a 5,000 GB data storage. The company was handed over 20 files for placement. The volume of one file is 256 GB. Not all the data will fit in the storage. How many files can we put in the storage? How much free space will be left? Write a program that does the computations.
Expected output	The storage will be able to fit 19 files 136 GB will remain
| Solution | ```python
total_storage = 5000
file_size = 256

amount_files_in_storage = total_storage // file_size
free_space = total_storage - amount_files_in_storage *
``` |

```
file_size

print("The storage will be able to fit",
amount_files_in_storage, "files.")
print(free_space, "GB will remain")
```

3.1 - The input function	Print the total price of the trip
Instructions	A program for a travel agency calculates the cost of staying at a hotel for the entered number of days. It should ask for the cost of one night at the hotel and for the total number of days
Expected output	Enter the cost of one night at the hotel: >>>2800 Enter the number of days of the trip: >>>5 Price of the trip: 14000
Solution	```night_cost = input("Enter the cost of one night at the hotel: ")``` `amount_days = input("Enter the amount of days of the trip: ")` `total = int(night_cost) * int(amount_days)` `print("Price of the trip:", total)`

3.2 - The input function	Write a program that composes an automatic email to a client
Instructions	Write a program for the sales department. The employees want to automatically send a promotional offer by email. The program should ask for: - the name of the client, - the number of previously purchased trips, - the proposed trip. The program should compose an automatic email from the answers. The text for the email is: Hello, You have traveled with us ... times already! Do you want to again? Our travel agency is having a sale. Trips to ... are 50% off!
Expected output	Client name: >>>Anna Number of package tours bought:

	>>>4 Destination offered: >>>Hong Kong Hello Anna, You have traveled with us 4 times already! Do you want to again? Our travel agency is having a sale. Trips to Hong Kong are 50% off!
| Solution | ```python
customer_name = input("Client Name: ")
number_of_trips = input("Number of tours bought: ")
destination = input("Destination Offered: ")

print("Hello " + customer_name + ",")
print("You have traveled with us " + number_of_trips +
" times already! Do you want to again?")
print("Our travel agency is having a sale. ATrips to "
+ destination + " are 50% off")
``` |

4.1 - Strings	Concatenate two strings and print the result.
Instructions	Create two variables: ● hello_string = "Hello" ● world_string = "World" Concatenate both strings and print the result.
Expected output	HelloWorld
| Solution | ```python
hello_string = "Hello"
world_string = "World"

print(hello_string + world_string)
``` |

4.2 - Strings	Repeat a string five times and print the result.
Instructions	Create the variable: ● input_string = "Python" Repeat the variable five times and print the result.
Expected output	PythonPythonPythonPythonPython
| Solution | ```python
input_string = "Python"
print(input_string * 5)
``` |

4.3 - Strings	Calculate the length of a String
Instructions	Write a program to request the customer for a review, thank them and print the length of their review.
Expected output	Leave a travel review: >>>Cool! Thanks for the review! It is 5 characters long.

Solution	```python
	review = input("Leave a travel review: ")
	print("Thanks for the review! It is", len(review), "characters long.")
	``

4.4 - Strings	Search for words in Strings
Instructions	The owner of a restaurant is interested in whether clients like their specialties: chocolate cake and barbecue. Write a program that asks the user for the dishes they like and prints the search result: - If the dish is found, the program prints the number of the symbol from which the dish begins. - If the dish is not found, the program prints -1. Take into account that the client's review might include uppercase and lowercase letters.
Expected output	Enter your favorite dishes: >>>barbecue, burger, pizza chocolate cake: -1 barbecue: 0

Solution	```python
	feedback = input("Enter your favorite dishes: ")
	feedback = feedback.lower()
	dish1 = "chocolate cake"
	dish2 = "barbecue"
	print(dish1 + ": " + str(feedback.find(dish1)))
	print(dish2 + ": " + str(feedback.find(dish2)))
	``