

Laboratory Report



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Description

In the second week, we started to learn python by understanding variables and assignment, data structures and documentation. Then, we started to further develop on it and learned about loops, functions, modules and packages.

Aims

The aim for our second week labs were –

1. To learn about Assignments, Data types, Strings, String Interpolation, Arithmetic operators, Comparison Operators , Logical and Boolean Operators, Escape Sequences and variables.
2. To learn about Commenting Code and Documentation.
3. To learn about Lists, Tuples, Dictionaries, and Sets.
4. To learn about Flow Control (If, Elif and Else), Loops (for loops and while loops) and List Comprehensions.
5. To learn about Functions.
6. To learn about Module.

Methodology

Followed the walkthrough and carried out the instructions given in walkthrough.

1. Exercise_01 - Done according to walkthrough 1. [1]
2. Exercise_02 - Done according to walkthrough 2. [2]
3. Exercise_03 – Done according to walkthrough 3. [3]
4. Exercise_04 – Done according to walkthrough 4. [4]
5. Exercise_05 – Done according to walkthrough 5. [5]
6. Exercise_06 – Done according to walkthrough 6. [6]

Results and Testing

The result of all exercises of walkthrough is included in the attached folder.

Conclusions

Here we had learned about the python and for that we referred a course on LinkedIn learning [7] and walkthrough provided by our lecturer.

In second week we had learned about the assignments and how we assign value to a variable . we had also learned about the different type of data and we had also used `print(type(variable))` function to print the type of data. [1]

In the python file named `arithmetic_operations.py` , we had learned to use all the arithmetic operations including addition, subtraction, multiplication, division , modulo, exponentian, and floor division by using variable a and b, whose values was given 4 and 6 respectively . then we runned the python file and got the correct output. [1]

In the python file named `budget.py` , we tried to calculate the budget of a semester by assigning the values to the variables and got the left out amount to spend in the result. [1]

In the python file named `slicing.py`, we learned about the string and how can we slicing of a string and how to reverse a string. We had also learned how to reassemble a string by inserting a letter in the old string. [1]

In the python file `string_functions.py`, we had used a string and tried to find it's length and it's type. We had also tried to split and join the string. We had also tried to find the upper and lower case of the string and got the result. We had also used remove suffix and prefix on the string. [1]

In the file named `printing.py` , we had used end operation , and `\n` and `\t` functions on different strings and got the result . [1]

In the second walkthrough we had learned about the documentation and commenting a code. Here we had made a python file named `document.py` in which we used the `def` function. [2]

In the file named `my_list.py`, we had learned how to create a list , how to find no. of elements in the list and concatenate both lists , remove something from a list, change element in a list , append in a list , insert in a list, extend a list and how to reverse a list. [3]

In the file named `my_sets.py` , we had learned to create a set and how to add something in a set. [3]

In the file named `my_tuples.py` , we had created a tuple and learned how to get a specific element from a tuple. [3]

In the file name `dictionaries.py` we had tried to create a dictionary of key and values. [3]

In the 4th walkthrough we had learned to create loops by using If, Elif , Else Statement and for loop and while loop statement. Here we created file named `my_forloop.py` , `my_if_else.py` and `my_while.py` to show how we can use if, elif, else , for loop and while loop statement. In this walkthrough we have solved a exercise about air condition named `airconditionloop.py` .

In the 5th walkthrough we had learned about the functions. Here we learned about passing and returning values , map and lambda functions. All these functions are shown in the file name `functions.py` .

In the 6th walkthrough we had done the exercises given in the walkthrough about modulas and done the exercise about cube and square.

References

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