MIT World Peace University
Python Programming

Assignment 1

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Contents

1 Problem Statement

Introduction to basic Python Commands.

2 Aim

To learn the basics of the python programming language and understand fundamental syntax and semantics of Python Programming.

3 Objectives

1. To learn the basics of python programming language.
2. To learn the variable declaration,user input and output of the programming language.

4 Theory

4.1 *Introduction to Python*

Python is a high-level, interpreted programming language that was first released in 1991. It is known for its simple and easy-to-read syntax, making it a popular choice for beginners and experienced developers alike. Python can be used for a wide range of tasks, including web development, scientific computing, data analysis, artificial intelligence, and more. It is an open-source language with a large and supportive community, and has a vast library of modules and tools available to users.

4.2 *Basic Commands in Python*

1. Print: display a message on the screen. For example, print ("Hello World ").
2. Variable assignment: assign a value to a variable. For example, x = 5.
3. Arithmetic operations: perform mathematical operations such as addition, subtraction, multiplication, and division. For example, x + 5, x - 5, x * 5, and x / 5
4. Conditional statements: make decisions based on conditions. For example, if x ¿ 5: print ("x is greater than 5").
5. Loops: repeat a block of code multiple times. For example, for i in range (5): print (i).
6. Importing modules: use pre-existing code from other sources. For example, import math to use mathematical functions.

4.3 *Standard Data Types*

The data stored in memory can be of many types. Python has various standard data types that are used to define the operations possible on them and the storage method for each of them.
Python has 5 standard data types:

- Numbers
- String
- List
- Tuple
- Dictionary

5 Platform

Python
Mac OS 64-bit
Visual Studio Code

6 Code Input/Output

```
    print("Hello world!")
```

Listing 1: print function input

```
    Hello world!
```

```
# declare variable
a = 3
print(a)
print(type(a))
b = 3.5
print(type(b))
print(b)
c = "Hello"
print(c)
print(type(c))
```

Listing 2: declaring variable input

```
3
<class 'int'>
<class 'float'>
3.5
Hello
<class 'str'>
```

```
a = 5
b = 6
print(a + b)
```

Listing 3: performing arithmetic operation input

```
11
```

```
a = input("Enter First Name:")
b = input("Enter Last Name:")
print(a + b)
```

```
naman soni
```

```
x = int(input("Enter the first number:"))
y = int(input("Enter the second number:"))
z = x + y
print("Sum is:", z)
```

```
Sum is: 66
```

```
x = float(input("Enter the first number:"))
y = float(input("Enter the second number:"))
z = x + y
print("Sum is:", z)
```

```
Sum is: 110.6943
```

```
a = 45
b = 65
if (a == b):
    print("equal")
else:
    print("not equal")
```

```
not equal
```

```
my_list = [12, 13, 56, 43]
print(my_list)
```

```
[12, 13, 56, 43]
```

7 Conclusion

Understood the basic commands, statements and syntax of python programming language.

8 FAQ's

1. What are the features of python language?

   - 1. Easy to Learn: Python has a very simple and elegant syntadx which is much easier to understand then other programming languages.
   - 2. Interpreted Language: Python is an interpreted language which means thet the written code is not actually translated to a computer-readable format at the time of execution.
   - 3. Cross-Platform Language: Python can run equally on diffrent platforms such as Windows, Linux, Unix and Macintosh, etc. Thus, we can develop applications with more compatibility with others.
   - 4. Object-Oriented Language: Python supports object-oriented language and concepts of classses and objects come into existence.
   - 5. Dynamic Typing: Python uses dynamic typing, which means that variables can change type during runtime, making it more flexible than statically typed languages.
   - 6. Large Standard Library: Python has a large standard library that includes modules for various tasks, such as file I/O, regular expressions, and Internet protocols.

2. Explain print () statement of python language.
   Ans. The print() function in Python is used to display text or output data on the screen. It can be used to print simple text strings, variables, expressions, or complex objects such as lists, dictionaries, and objects.
   The basic syntax of print() function is:

```
    print(object(s), sep=separator, end=ending, file=file, flush=flush)

```

Listing 4: Basic Syntax of Print function

3. How to write single line and multi-line comments in python programming language.
   Ans. In Python, you can add comments to your code to make it more readable and explain what it does. There are two ways to write comments in Python:

   (a) Single-line comments: Single-line comments start with a (hash) symbol and continue to the end of the line. They are used to add brief explanations or notes to your code.

```
        # This is a single line comment

```

(b) Multi-line comments: Multi-line comments are used to add longer explanations or notes to your code. They start with (”’) or (”””) and end with the same sequence.

```
        '''
        This is a
        multiline
        comment
        '''

        OR

        """
        This is also
        a multline
        comment
        """

```