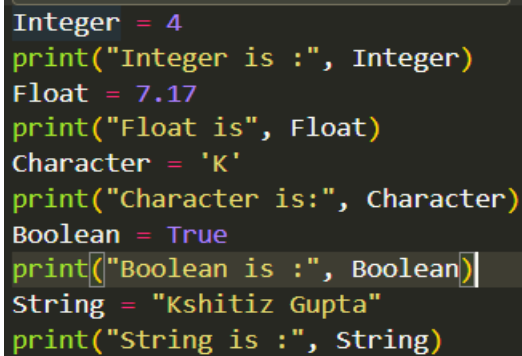


Lab Assignment 1

1. Write a program to demonstrate basic data type in python.

```
Integer = 4
print("Integer is :", Integer)
Float = 7.17
print("Float is", Float)
Character = 'K'
print("Character is:", Character)
Boolean = True
print("Boolean is :", Boolean)
String = "Kshitiz Gupta"
print("String is :", String)
```



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print("Integer is :", Integer)
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```

2. What is a docstring in Python? Why are docstrings important in Python programming? How can you write a docstring for a function in Python? Can you access the docstring of a function programmatically? If yes, how?

Ans) A docstring is a string literal that occurs as the first statement in a module, class, function, or method definition. It provides a way to document the purpose and usage of the code.

Documentation: Docstrings serve as documentation for your code. They explain what a piece of code does and how to use it.

Readability: Well-documented code is more readable and maintainable. Docstrings help other developers (or even yourself) understand the purpose and usage of functions or modules.

Autogeneration of Documentation: Tools like Sphinx can use docstrings to automatically generate documentation for your code.

To access the docstring programmatically, you can use the “`__doc__`” attribute of the function.

3. Write a program for checking if the given number is even or odd.

```
Ans) number = int(input("Enter a number: "))  
if number % 2 == 0:  
    print('Even')  
else:  
    print('Odd')
```

```
PS C:\Users\Kshitiz Gupta\Desktop\kg> python -u "c:\Users\Kshitiz Gupta\Desktop\kg\assign1Q.3.py"  
Enter a number: 5  
Odd
```

4. Write a program that takes 2 numbers as command line arguments and prints its sum.

```
Ans) def add(x, y):  
    #This is to add 2 numbers  
    print("Sum =", (x + y))
```

```
add(10, 71)
```

```
PS C:\Users\Kshitiz Gupta\Desktop\kg> python -u "c:\Users\Kshitiz Gupta\Desktop\kg\assign1Q.4.py"  
Sum = 81
```

5. Write a program that prompts the user to input the length and the width of a rectangle and outputs the area and circumference of the rectangle.

```
Ans) length = float(input("Enter the length of the rectangle: "))  
width = float(input("Enter the width of the rectangle: "))  
area = length * width  
circumference = 2 * (length + width)  
print(area)
```

```
print(circumference)
```

```
Enter the length of the rectangle: 12
Enter the width of the rectangle: 5
60.0
34.0
```

6. Write a program to read a person's age from the keyboard and display whether he is eligible for voting or not.

Ans) `age = int(input("Enter a age : "))`

`if age >= 18:`

`print("You can vote")`

`else:`

`print("you are not eligible for voting")`

```
Enter a age : 17
you are not eligible for voting
```