```
                        Python Data Types

    Numeric       Boolean      Dictionary      Set      Sequence

 Integer    Float                                  Strings    Tuple

      Complex Number                                     List
```

1. Numeric Data

Numeric data types represent the data which has numeric value. Numeric values are generally integers, floating numbers or complex numbers. These values are defined as int, float and complex class in Python.

- **Integers:** This value is represented by int class. It contains positive or negative whole numbers (without fraction or decimal).

- **Float:** This value is represented by float class. It is a real number with floating point representation. It is specified by a decimal point.

- **Complex Numbers:** Complex number is represented by complex class. It is specified as (real part) + (imaginary part) j. For example: 2+3j

2. Boolean

Boolean type is a Python built-in data type that represents one of two values. True or False. It is most commonly used to indicate the truth expressions. For instance, 1==1 is True, while 2<=1 is False.

Program

```python
print(type("Hii"))  # prints <class 'str'>
# string is an immutable collection of Unicode character enclosed
# within 'Mumbai' , "Mumbai" , """Mumbai"""



print(type(35))    # prints <class 'int'>
# int can be expressed in Decimal, Binary, Octal, Hexadecimal
# Binary starts with 0b/0B
# Octal with 0o/0O
# Hexadecimal with 0x/0X


print(type(3.14))   # prints <class 'float'>


print(type(3+2j))   # prints <class 'complex'>
# complex contains real and imaginary parts


print(type(True))   # prints <class 'bool'>
# bool can take any of the two Boolean values both strting in caps True, False


print(type(b'\xa1\xe4\x56'))   # prints <class 'bytes'>
# represents 3 bytes with hex values a1e456



# Simple Variable and Assigning them the Values
name="Sanjay"
age=20
per=78.23

# Multiple Variable and Assigning them the Values
name="Sanjay" ; age=20 ; per=78.23 # use ; as statement seperator
                # OR
name, age, per = "Sanjay", 20, 78.23

a=b=c=d = 5


# Multi-lining
# If Statements are long they can be written as multi-lines with each lines with each line
except the last ending with \

# Example:
total = physics + chemistry + maths +\
    english + Marathi + history +\
    geography + civics

# Multi-line statements within [], {}, or () don't need \

# Example:
days = ["Monday","Tuesday","Wednesday","Thursday",
        "Friday","Staurday","Sunday"]


print(4 + 3.3)  # Operation between int and float will return float
print(3 + 3+2j) # Operation between int and complex will return complex
print(7.5 + 45j+23) # Operation between float and complex will return complex


# But if we want in int, str, chr etc.. It can be Done
print(int(4+3.3))
print(type(str(4+3.3)))    # prints <class 'str'>
print(chr(65))    # prints A (yields character corresponding to int)



# When multiple operators are used in an arithmetic expression, it is evaluated on the basis of
precedence (priority) of the operation used.

# Operation in dec order of their priority (PEDMAS)

# ()             # Parentheses
# **             # Exponentiation, Division
# *, /, //, %    # Multiplication, Division
# +, -           # Addition, Subtraction
```

Program

```python
a = 5
b = 7

print("\nAddition is:",a+b)    # \n is for the new line always written in " " Quotes
print("\nSubtraction is:",a-b)


# OUTPUT:
# Addition is: 12
# Subtraction is: -2




num1 = int(input("Enter a number: "))
num2 = int(input("Enter another number: "))

print(f"Addition of {num1} and {num2} is {num1+num2}")
print(f"Subtraction of {num1} and {num2} is {num1-num2}")
print(f"Multiplication of {num1} and {num2} is {num1*num2}")
print(f"Division of {num1} and {num2} is {num1/num2}")
print(f"Modulus of {num1} and {num2} is {num1%num2}")
print(f"Floor Division of {num1} and {num2} is {num1//num2}")
print(f"Exponential of {num1} and {num2} is {num1**num2}")


# OUTPUT:
# Enter another number: 3
# Addition of 2 and 3 is 5
# Subtraction of 2 and 3 is -1
# Multiplication of 2 and 3 is 6
# Division of 2 and 3 is 0.6666666666666666
# Modulus of 2 and 3 is 2
# Floor Division of 2 and 3 is 0
# Exponential of 2 and 3 is 8




radius = int(input("Enter the value of Radius: "))

Area = 3.14 * (radius**2)
print(f"Area of Circle is: {Area}")


# OUTPUT:
# Enter the value of Radius: 5
# Area of Circle is: 78.5
```