Papers Dock

PYTHON

9618

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Papers Dock

THINGS WE NEED TO COVER

- PYTHON BASICS
- BUBBLE SORT AND INSERTION SORT
- OBJECT ORIENTED PROGRAMMING
- ADT (STACKS QUEUE LINKED LIST BINARY TREE)
- FILES PROCESSING AND EXCEPTION HANDLING
- RECURSION

PRINT FUNCTION

OUTPUTS THE TEXT OR ANY INFORMATION STORED IN A VARIABLE

SYNTAX

```
print("Enter text here")

print(x)
```

VARIABLES

PYTHON HAS NO COMMAND FOR DECLARING A VARIABLE.
A VARIABLE IS CREATED THE MOMENT YOU FIRST ASSIGN A
VALUE TO IT.

YOU ARE SUPPOSE TO DECLARE THE VARIABLES IN COMMENT AS
IT IS THE REQUIREMENT FOR YOUR EXAM

COMMENTS

#THIS IS A COMMENT

RULES FOR THE NAME OF VARIABLE

- VARIABLE NAME SHOULD BE SENSIBLE
- A VARIABLE NAME MUST START WITH A LETTER OR THE UNDERSCORE CHARACTER
- A VARIABLE NAME CANNOT START WITH A NUMBER
- A VARIABLE NAME CAN ONLY CONTAIN ALPHA-NUMERIC CHARACTERS AND UNDERSCORES (A-Z, 0-9, AND _)
- VARIABLE NAMES ARE CASE-SENSITIVE (AGE, AGE AND AGE ARE THREE DIFFERENT VARIABLES)

VALID EXAMPLES

sum = 0   Sum = 0   _sum1 = 0

INVALID EXAMPLES

1sum = 0   sum-1 = 0   sum 1 = 0

DATATYPES

String (str) : "Text "

Integer (int) : Numbers

Float : Real Numbers

CONVERTING DATATYPES

Number 1 = 5.456

print(type(Number1))

type() is a function that returns the Datatype

NumberInteger = int(Number1)

print(type(NumberInteger))

```python
Number1 = 5.456
print(type(Number1))
NumberInteger = int(Number1)
print(NumberInteger)
print(type(NumberInteger))
```

```
<class 'float'>
5
<class 'int'>
```

MATHEMATICAL OPERATORS

Addition +

Subtraction -

Division /

Multiplication *

Practice Question

Assign 50 in a variable (Num1) multiply that number with 40.45 and store the solution in a variable (Answer) and print only the integer part of the Answer with a relevant message and declare all the variables used

```
# Declare Num1 : Integer
# Declare Answer: Real/Float
Num1 = 50
Answer = 50*40.45
print("The Answer is:", '', int(Answer))
```

The Answer is: 2022

STRING CONCATENTAION

String : Any text in speech marks ""

Concatenation : Link together

Example

"Taha" + "Ali"

"TahaAli"

Combined = "Taha" & "Ali"

Example

"Taha" + "Ali"

"TahaAli"

Combined = "Taha" + "Ali"

Practice Question

Assign your First Name in a variable (String1) and your Second Name in a variable (String2) and combined both of the string with space between them and store it in a variable (Combined_String)

```python
#Declare String1, String2, Combined_String : string
#
String1 = "Taha"
String2 = "Ali"
Combined_String = String1 + " " + String2
print(Combined_String)
```

```
Taha Ali
```
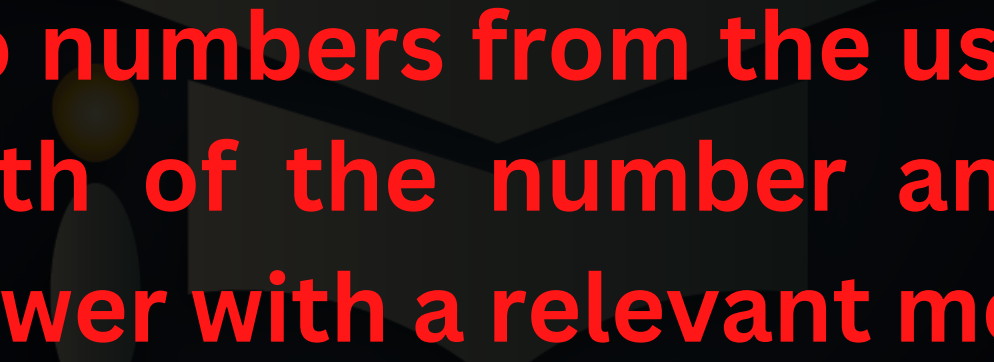
INPUT FROM THE USER

Number = **input**("**Enter Number**")

Note: In python input function always returns string value so if it's a number then you are suppose to change it into integer or float

```python
Number = input("Enter Number: ")
print(Number)
```

```
Enter Number: 45
45
```

PRACTICE QUESTION

Ask two numbers from the users and add both of the number and print the Answer with a relevant message

```python
Number1 = float(input("Enter Number 1: "))
Number2 = float(input("Enter Number 2: "))
Answer = Number1 + Number2
print("The sum of both the numbers is: ", Answer)
```

```
Enter Number 1: 30.5
Enter Number 2: 20.4
The sum of both the numbers is:  50.9
```