ASSIGNMENT NO 1

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Q1. In the below elements which of them are values or an expression? eg:- values can be

integer or string and expressions will be mathematical operators.

|  |  |
| --- | --- |
| VALUE | EXPRESSION |
| “hello” | \* |
| -87.8 | - |
| 6 | / |
|  | + |
|  |  |

Ans :

Q2. What is the difference between string and variable?

Ans : A string is a type of dataset which is generally enclosed with “ string “ quotation marks and contains information in it.

For example – **“This is a string data” , “Nirbhay36”**

A variable is symbolic name which is used to store data. The data is assigned to the variable so that whenever we need to use the dataset we can call it by a variable name given to it. Variable name can be like **X , Y , AGE , NAME , \_H1**. Variable name cannot start with number or symbol.

In simple words string is one of the datatype that a variable can store.

Q3. Describe three different data types.

Ans : The three different data types are as follows

1. **Numeric** - Numeric data is the one which contains only numbers in it. The numeric data type can be classified as integers , floating numbers or complex numbers.

Integers are the whole numbers. For ex. 45 , 10 ,1 ,99898

Floating numbers are the decimal point numbers. For ex 12.12, 15.0003, 10.0

Complex numbers are made up of real and imaginary numbers. For ex 2+5j , 7j

1. **String** - A string is a type of dataset which is generally enclosed with “ string “ quotation marks and contains information in it. It is a sequence of character data. Strings may be derived using either single or double or triple quotes. For ex “Nirbhay Ahir is a Ineuron Student” , “June22”
2. **Boolean** – Boolean is data type which contains only two values ie True or False. It is basically used to check whether the condition is true or false. Python only considers True or False with ‘T’ and ‘F’ in capital letters. It is denoted by class bool.

Q4. What is an expression made up of? What do all expressions do?

Ans – An expression is a mixture or a combination of several things like values , variables and mathematical operators.

Expressions are used to evaluate data and give us a certain value. If we ask python to print an expression it will give a certain value once it evaluates if expression has no error.

For ex. 78+22 , a+b , W\*2

Q5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

Ans – The assignment is basically a statement which is used to give a particular value to a variable. The assignment operator “=” allows to store a value or change a value of a particular variable. For ex . Age = 50 , Name = Nirbhay

Whereas expressions are used to evaluate data and give us a certain value.

Q6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

Ans – The variable Bacon will contain value 22.

Explanation - In this code first a variable *bacon* is assigned with the value 22 and then in the next line bacon is added 1 to itself. So when we run that we get 23 as the value of the expression but the value of the variable bacon does not change after running the code as no new assignment has been done in the variable bacon.

Q7. What should the values of the following two terms be?

‘spam’+ ‘spamspam’

‘spam’\* 3

Ans - The value of the first term will be

‘spam’+’spamspam’ = ‘spamspamspam’

The value of the second term will be

‘spam’\* 3 = ‘spamspamspam’

Q8. Why is eggs a valid variable name while 100 is invalid?

Ans - While declaring a variable, the variable name cannot start with number or symbol ( “\_” is allowed).

eggs is a valid variable name as it satisfies the condition of the variable declaration whereas 100 is purely a numeric quantity which cannot be used to declare a variable as is does not satisfies with the condition.

Q 9. What three functions can be used to get the integer, floating-point number, or string version of a value?

Ans – The three functions uuse to evaluate are

int() for integer ,

float() for floating point number and

str() for a string.

Q 10. Why does this expression cause an error? How can you fix it?‘I have eaten ‘+ 99 +’ burritos.’

Ans - Concatenate function is used here but the problem that causes an error is that a string can only concatenate to a string and not a integer.

So to fix it we can simply rewrite by taking the number 99 inside any of the string and removing the “+” sign like

'I have eaten '+ '99 burritos.'