1. 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.

\* = **operator**

'hello' = **string**

-87.8 = **Integer**

- = **operator**

/ = **operator**

* = **operator**

6 = **integer**

2. What is the difference between string and variable?

* **String**: A string is a data type in Python, made up of a collection of characters. it is also known as array of character. It can include letters, numbers, and even special characters. it is always dentoted by **single quote** or **double quote**

Example: “Vikas”, “12Vikas”, “123”, ‘v124’

* **Variable**: It is a reserved memory location that stores and manipulates data. *Basically variable are the entities tha hold the value in python.*

Example: v = 1000 , var = “vik”

3. Describe three different data types.

* **Integer**: It holds signed integers of non-limited length.
* **String** : it is collection of characters. It can include letters, numbers, and even special characters. it is always dentoted by single quote or double quote
* **Float**: it holds floating precision numbers and it’s accurate up to 15 decimal places.

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

**Expression**: An expression is a made up of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you are going to print an expression, the interpreter evaluates the expression and displays the result.

***An expressions are made up of values, variables, operators, and calls to functions***

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

**Statement**: A statement is an instruction that the Python interpreter can execute. We have only seen the assignment statement so far. Some other kinds of statements that we’ll see shortly are while statements, for statements, if statements, and import statements.

**Expression:** An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.

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

bacon = 22

bacon + 1

**Output**

**bacon = 23**

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

'spam' + 'spamspam'

**Output**: **‘spamspamspam’**

'spam' \* 3

**Output**: **'spamspamspam'**

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

**Ans**: 100 is invalid as per the python syntax, the first character of a variable name should not be a digit.

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

Answer:

* **int()**
* **float()**
* **str()**

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

**Error**: TypeError: can only concatenate str (not "int") to str

**Answer** : 'I have eaten ' + '99' + ' burritos.'