Assignment 1

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.

\* - expresssion

'hello’- value(string value)

-87.8 - value(float value)

- - expression

/ - expression

+ -expression

6 - value(int value)

2. What is the difference between string and variable?

Variable – Variable is a symbol which is used to store a data. Ex- a=67,year=2022

String- String is type of information that we want to store usually the collection of characters(letters) Ex- c=’hello’,e=”ineuron”

3. Describe three different data types.

**Numeric data** – Numeric data can be integer,complex numbers,float.

Int – Int known as integer data type . All integer number belongs to integer data type.Ex-4,77,-88.

Float - Decimal numbers belongs to float data type.Ex- 88.7,-6.7,99.99999

Complex numbers - Complex numbers contains real part and imaginary part.Ex- 2+3j

**Sequence Type** -

* String
* List
* Tuple

String - String is a collection of one or more characters put in single quote,double quote or triple quote. And also string is a immutable.

Ex- ‘hello’,”ineuron”,’’’Data Science’’’.

List - List is collection of data in square brackets[ ],the items in the list is need not to be same type. List is mutable maens we can also modify after created.

Ex- A=[‘data’,22,”books”]

Tuple - Tuple is collection of data in parantheses( ) ,the items in the tuple is of any type.Tuple is immutable means we cannot modify after created.

**Boolean-** Data type with two built-in values TRUE for 1 value and FALSE for 0 value.

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

Expression is a combination of operands and operators which evaluates to give other value.

Ex- 10+2,a\*b.

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

|  |  |
| --- | --- |
| Statement | Expression |
| A statement executes something.  Execution of statement may or may not produces or displays result value.It only do whatever the statement says.  Every statement can be a expression.  Ex- a=10 is a statement as well as expression. | An expression evaluates to a value.  Evaluation of an expression always produces or returns a value.  Every expression can’t be a statement.  Ex- c= a+b is a expression but not a statement. |

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

bacon = 22

bacon + 1

Ans: bacon contains value 22.

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?

eggs is a valid variable as it starts with alphabet.

100 is invalid because variables cannot start with number.

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

Int( ) function to get integer

float( ) function to get floating-point number

str( ) function to get string

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

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

'I have eaten ' + 99 + ' burritos.' Gives typeerror because it can only concate string to string ,string to int is not possible.

We can fix this error by giving single quotes to 99 that is 99 as string.

'I have eaten ' + ‘99’ + ' burritos.'