

**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.**

ANS -- asterisk (star) operator \* is used as multiplication operator,

For sequences such as string, list and tuple, \* is a repetition operator.

“Hello” - Is string

-87.8 - Float Value

‘ - ’ Subtraction Operator

‘/’ Division operator

+ Addition Operator

6 - Integer value

**2. What is the difference between string and variable?**

- Variable is stored information
- String is type information or alphabet, word which is stored in variable .
- String x = “Harshal”
- Here x is variable which is stored string value.

**3. Describe three different data types.**

1. List - list are build in data type in python used to stored collection of data.  
List created using square bracket  
List items are ordered, changeable, and allow duplicate values.
2. Tuple - Tuples are used to store multiple items in a single variable.  
Tuple also build in data type  
A tuple is a collection which is ordered and unchangeable.  
Tuples are written with round brackets.
3. Set - A set is a collection which is unordered, unchangeable\*, and unindexed.  
Sets are written with curly brackets.  
Once a set is created, you cannot change its items, but you can remove items and add new items.

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

An expression is a construct made up of variables, operators, and method invocations, which are constructed according to the syntax of the language, that evaluates to a single value.

Type Expression -

1. Constant Exp
2. Integral Exp
3. Bitwise Exp
4. Logical Exp etc.

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

Expression is consist of mathematical operators (Operands), value , container.  
Statement is command that execute in python like print command.

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

```
bacon = 22  
bacon + 1  
Ans = bacon=22  
    Bacon +1  
    23.
```

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

```
'Spam'+ 'spamspam'  
'spam'*3'
```

- 'spam'+ 'spamspam' = spamspamspam
- spam\*3 = spamspamspam
- Both ans should be same.

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

- As per the variable define rule we can not start variable with integer value
- If it is start with string then it valid H1000, Harsh, valid
- 100H invalid.

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

- `str()`, `float()`, `int()`

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

- `'I have eaten' + 99 + 'burritos.'`
- Because integer value can not concatenate with string value
- if we have to concatenate it we need to do typecasting.