

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.

*	Expression
'hello'	Value
-87.8	Value
-	Expression
/	Expression
+	Expression
6	Value

2. What is the difference between string and variable?

Variable is a place where we can store the information while string is a type of information which is stored in variable and is always enclosed in Quotes.

e.g:- a="hello world"

Here **a** is the variable while **"hello world"** is the string.

3. Describe three different data types.

Data Type:-

1. **Integer:-** This data type consists of only integer. For e.g. :- 1,2,3,4,5.
2. **String:-** This data type consists of string, i.e. a set of characters like hello world, Sharath, etc. This is declared by enclosing it in double quotes

Code Example

```
A = 10
```

```
B = "sharath dinesh"
```

```
print(type(A))
```

```
print(type(B))
```

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

ANS: - An expression is a combination of operators and operands that is interpreted to produce some other value. In any programming language, an expression is evaluated as per the precedence of its operators.

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

Ans:- Expression consists of operator and operand while statement doesn't have. In this case, there is no operator and only Assignment operator. Hence, this is an assignment statements.

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

```
bacon = 22
```

```
bacon + 1
```

Ans:- 22 (Because in second statement the value is not assigned to the variable , hence the value 22 is untouched.)

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

```
'spam' + 'spamspam' ← Output is 'spamspamspam'
```

```
'spam' * 3 ← Output is 'spamspamspam'
```

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

For a valid variable name, the name should start with either Alphabets or Underscore. If it starts with number then it's a invalid variable name. As given in this question **eggs** is a valid name because eggs starts with alphabets while **100** starts with number and it a value not a variable.

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

Int(),float() and str() are the functions will evaluate integer, floating-point number and string of the value passed to the functions respectively.

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

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

Because we cannot concatenate string and integer, i.e. cannot join string and integer together.

In order to fix this the simple solution instead of writing 99 as integer write it in string format.

Updated Code:-

```
'I have eaten'+99+'burritos'
```