

# PYTHON ASSIGNMENT- 1

## QUESTIONS :

**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.**

**\***

**'hello'**

**-87.8**

**-**

**/**

**+**

**6**

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

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

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

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

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

```
bacon = 22
```

```
bacon + 1
```

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

```
'spam' + 'spamspam'
```

```
'spam' * 3
```

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

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

**version of a value?**

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

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

# ANSWERS

1.

## Values or Expressions:

- **Values:** 'hello', -87.8, 6
- **Expressions:** \*, -, /, +

2. **Difference between String and Variable:**

- **String:** A string is a sequence of characters, typically used to represent text.
- **Variable:** A variable is a container for storing data values. It has a name and can hold different types of data, including strings.

3. **Three Different Data Types:**

- **Integer:** Whole numbers without decimal points.
- **Floating-point:** Numbers with decimal points or in scientific notation.
- **String:** Sequence of characters, typically used for text.

4. **Expression Composition and Purpose:**

- **An expression is made up of values, variables, and operators.**
- **Expressions perform calculations and produce a result.**

5. **Expression vs. Statement:**

- **Expression:** Produces a value. (e.g., 5 + 3)
- **Statement:** Performs an action but doesn't produce a value. (e.g., assignment statements like spam = 10)

6. **After Running Code:**

- **The variable bacon contains the value 22 because the expression bacon + 1 is not assigned back to the variable.**

7. **Values of Terms:**

- **'spam' + 'spamspam': 'spamspamspam'**

- `'spam' * 3: 'spamspamspam'`

## 8. Validity of Variable Names:

- `eggs` is a valid variable name because it starts with a letter. Variable names cannot start with a number.
- `100` is invalid as a variable name because it starts with a number.

## 9. Functions for Data Type Conversion:

- `int()`: Gets the integer version of a value.
- `float()`: Gets the floating-point number version of a value.
- `str()`: Gets the string version of a value.

## 10. Expression Causing Error:

- The expression `'I have eaten ' + 99 + ' burritos.'` causes an error because you cannot concatenate a string with an integer directly.
- To fix it, convert the integer to a string using `str(99)`:  
`'I have eaten ' + str(99) + ' burritos.'`