**Assignment 1 - Solutions**

1. **Identify which are values or expressions:**
   1. `'hello'` → Value (String)
   2. `-87.8` → Value (Float)
   3. `-` → Expression (Operator)
   4. `/` → Expression (Operator)
   5. `6` → Value (Integer)
2. **Difference between string and variable:**
   1. String: A sequence of characters enclosed in quotes, e.g., `"hello"`.
   2. Variable: A name that stores data or references a value. It can store strings, numbers, etc., e.g., `name = "John"`.
3. **Three different data types:**
   1. Integer (int): Whole numbers, e.g., `10`
   2. Float: Decimal numbers, e.g., `3.14`
   3. String (str): Text data, e.g., `"Python"`
4. **What is an expression made up of? What do all expressions do?**
   1. An expression is made up of values, variables, and operators.
   2. All expressions evaluate to a value.
5. **Difference between expression and statement:**
   1. Expression: Produces a value, e.g., `2 + 2`
   2. Statement: Performs an action, e.g., `spam = 10` assigns value to a variable.
6. **After running this code, what is the value of `bacon`?**

bacon = 22

bacon + 1

* 1. Value of bacon remains `22` because `bacon + 1` doesn’t assign the result back. Use `bacon = bacon + 1` to update.

1. **Values of the following expressions:**
   1. 'spam' + 'spamspam' → 'spamspamspam'
   2. 'spam' \* 3 → 'spamspamspam'
2. **Why is `eggs` valid and `100` invalid as a variable?**
   1. Variable names cannot start with a number.
   2. `eggs` is valid because it starts with a letter.
   3. `100` is invalid because it's a number.
3. **Three functions to convert types:**
   1. `int()` → Converts to integer
   2. `float()` → Converts to floating-point
   3. `str()` → Converts to string
4. **Why does this cause an error and how to fix it?**

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

* 1. Error: Cannot concatenate a string with an integer.
  2. Fix: Convert `99` to string:

'I have eaten ' + str(99) + ' burritos.'