Programming Assignment - 1

# Python Statements

1. Write a piece of Python code that prints out the string ‘hello world’
2. Write a piece of Python code that prints out the string 'hello world' if the value of an integer variable, happy, is strictly greater than 2.
3. Assume that two variables, varA and varB, are assigned values, either numbers or strings.Write a piece of Python code that evaluates varA and varB, and then prints out one of the following messages:
   1. "string involved" if either varA or varB are strings
   2. "bigger" if varA is larger than varB
   3. "equal" if varA is equal to varB
   4. "smaller" if varA is smaller than varB
4. Convert the following into code that uses a while loop.  
   prints 2

prints 4

prints 6

prints 8

prints 10

prints Goodbye!

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   prints Hello!

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prints 8

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1. Write a while loop that sums the values 1 through end, inclusive. end is a variable that is defined previously. So, for example, if end is defined to be 6, your code should print out the result:  
   21  
   which is 1 + 2 + 3 + 4 + 5 + 6.
2. Convert the following into code that uses a for loop.  
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1. Convert the following into code that uses a for loop.  
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   which is 1 + 2 + 3 + 4 + 5 + 6.
2. Re-write the code below, but instead of nesting a for loop inside a while loop, nest a while loop inside a for loop.  
   iteration = 0  
   count = 0  
   while iteration < 5:  
    for letter in "hello, world":  
    count += 1  
    print("Iteration " + str(iteration) + "; count is: " + str(count))  
    iteration += 1
3. Assume s is a string of lowercase characters.
   1. Write a program that counts up the number of vowels contained in the string s. Valid vowels are: 'a', 'e', 'i', 'o', and 'u'. For example, if s = 'azcbobobegghakl', your program should print:  
      Number of vowels: 5
   2. Write a program that prints the number of times the string 'bob' occurs in s. For example, if s = 'azcbobobegghakl', then your program should print  
      Number of times bob occurs is: 2
   3. Write a program that prints the longest substring of s in which the letters occur in alphabetical order. For example, if s = 'azcbobobegghakl', then your program should print  
      Longest substring in alphabetical order is: beggh  
      In the case of ties, print the first substring. For example, if s = 'abcbcd', then your program should print  
      Longest substring in alphabetical order is: abc