Assignment 1

INSTRUCTIONS

1. We recommend, you try this assignment individually once, and when you have tried all the questions, you can discuss them in groups.
2. The slides etc reference links are available in Piazza.
3. If you have any questions, feel free to ask us on Piazza.

QUESTIONS

1. Write a function(call it **getHighest**) which takes in 4 numbers and returns the number which is the highest.
2. Write a function (call it **hasPairs**) which takes in 3 numbers and returns True if any 2 of them are same, else returns False (Hint: True and False are fixed boolean constants in python)
3. Write a function (call it **isVowel**) which takes an alphabet. Return True if the alphabet is a vowel, and False if it's not. (Hint: You can use string.lower() function to convert the string to lowercase. E.g. 'A'.lower() is equal to 'a').
4. Write a function (call it **hasVowelStart**) which takes a name, and then calls the *isVowel* function which you created on the first character of the name. It prints 'Name starts with vowel' if *isVowel* returns True, else it will print 'Name starts in consonant'.
5. Body Mass Index, or BMI is a common measure of physical fitness. It is defined as

$$BMI = weight(kg) / height^2(in\ m)$$

   i.e. weight in kilograms divided by square of height in metres.
   a. Write python code, which takes the user's height, and weight as input.
   b. Now write a function(call it **getBMI**) which takes in the 2 values (height and weight), and returns the BMI.
   c. Now write a function(call it **printBMI**) which takes the BMI, and prints out which prints out whether the user is overweight, etc. You can use the table below for reference.

Underweight = <18.5 Normal weight = 18.5–24.9 Overweight = 25–29.9 Obese = BMI of 30 or greater

OPTIONAL CHALLENGE QUESTIONS

Solve this only after you've attempted all the questions above.

6. *Optional Challenge Question*: Without using anything other than what we have learnt (like *for* loops), write code which prints all even numbers from 2 to 100. (Hint: what happens if a function calls itself?)