Homework 6 (Max Points:100)   **Due Date: March 11 by 11:59 pm EST**

Instructions: Each response should be in a .py file. Submit all your code to

https://submitty.cs.rpi.edu

Answer the following questions:

1. **Fibonacci series:** Write a Python program using 'While Loop' to get the Fibonacci series between 0 to a user provided value.
   Note : The Fibonacci Sequence is the series of numbers :
   0, 1, 1, 2, 3, 5, 8, 13, 21, ...
   Every next number is found by adding up the two numbers before it.
   For example if user provided value=50 then:
   Expected Output : 1 1 2 3 5 8 13 21 34. (**20 points**)
2. **Data computation:** Write a program that takes a user input 'n' and prints all numbers that are multiples of 5 up to n. (**20 points**)
3. **Print Data:** Write a function that takes two user inputs: an integer N, a Boolean. If Boolean is True, then return all even integers up to N (less than or equal to) else return all odd integers up to N (less than or equal to). (**20 points**)
   Test Cases:
   odd_even_print(10,False): 1,3,5,7,9
   odd_even_print(10,True): 2,4,6,8,10
   odd_even_print(13,False): 1,3,5,7,9,11,13
4. **Test Numbers:** Write python program that prints all odd numbers in a given range (both inclusive). For the range, read user provided input for the minimum value and the maximum value. (**20 points)**
   Test cases:
   Range is 11-25; Output: 11,13,15,17,19,21,23
   Range is 2-13; Output: 3,5,7,9,11,13
5. **Armstrong Number:** A positive integer is called an Armstrong number of order *n* if
   abcd... = an + bn + cn + dn + ...
   We are interested in Armstrong numbers of order 3 only. To write this program we can use the following property: In case of an Armstrong number of 3 digits, the sum of cubes of each digits is equal to the number itself. For example:
   153 = 1*1*1 + 5*5*5 + 3*3*3 // 153 is an Armstrong number.
   Write a Python program to check if a user provided three-digit number is an Armstrong number or not. (**20 points)**
   Hint: Separate each digit by dividing the number with 10 to get the remainder.