

1. Fibonacci Sequence

- a. In this exercise, you will implement the Fibonacci Sequence iteratively. The Fibonacci Sequence is formed such that every next number is the sum of the two previous numbers (with the sequence starting at 0 and 1). Here are the first few numbers in the sequence: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, etc. As you can see from this sequence, the n -th term is the sum of the $(n-1)$ th and $(n-2)$ th terms. Write an iterative solution in which the user inputs how many terms they want and output the sequence for that number of terms. Ensure that the input is a positive integer.
- b. Ex:
 - i. Input: How many terms do you want of the Fibonacci Sequence? 8
 - ii. Output: The sequence for 8 terms is: 0, 1, 1, 2, 3, 5, 8, 13

2. Palindrome

- a. In this exercise, you will implement an iterative function to check if a given number or string is a palindrome. A palindrome is a word or number that is the same forwards and backwards. For example, the word "racecar" is a palindrome and the number "12321" is a palindrome. You should write a function that utilizes a loop to check if the string that is passed into the function is a palindrome, and output the result to the screen. The string should be obtained from user input. Also if the word has uppercase letters and lowercase letters, the program should still output yes if the word is a palindrome (ex: Bob).
- b. Ex:
 - i. Input: Enter a word or number please that you would like to check if it is a palindrome or not: racecar
Output: Yes, it is a palindrome
 - ii. Input: Enter a word or number please that you would like to check if it is a palindrome or not: 1234
Output: No, it is not a palindrome