**Problem 1: Palindrome Checker**

**Scenario:** You are building a text editor that highlights palindromes in the text. A palindrome is a word that reads the same backward as forward.

**Description:** Write a script that checks whether a given string s is a palindrome or not. Ignore spaces, punctuation, and case differences.

**Sample Input:**

s = "A man, a plan, a canal, Panama"

**Sample Output:**

True

**Sample Input:**

s = "Hello, World!"

**Sample Output:**

False

**Problem 2: Fibonacci Sequence**

**Scenario:** You are developing a mathematical tool that helps students visualize the Fibonacci sequence.

**Description:** Write a script that generates the first n numbers in the Fibonacci sequence.

**Sample Input:**

n = 5

**Sample Output:**

[0, 1, 1, 2, 3]

**Sample Input:**

n = 10

**Sample Output:**

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]

**Problem 3: Anagram Checker**

**Scenario:** You are creating a word game where players need to form anagrams of a given word to score points.

**Description:** Write a script that checks if two strings s1 and s2 are anagrams. An anagram is a word formed by rearranging the letters of another word, using all the original letters exactly once.

**Sample Input:**

s1 = "listen"

s2 = "silent"

**Sample Output:**

True

**Sample Input:**

s1 = "hello"

s2 = "world"

**Sample Output:**

False

**Problem 4: Prime Number Checker**

**Scenario:** You are writing a utility for a number theory class that determines if a given number is prime.

**Description:** Write a script that checks if a given number n is a prime number. A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself.

**Sample Input:**

n = 7

**Sample Output:**

True

**Sample Input:**

n = 10

**Sample Output:**

False

**Problem 5: Sum of Digits**

**Scenario:** You are developing a feature for a financial application that calculates the digital root of a number, which is the sum of its digits.

**Description:** Write a script that calculates the sum of the digits of a given number n.

**Sample Input:**

n = 1234

**Sample Output:**

10

**Sample Input:**

n = 5678

**Sample Output:**

26

**Problem 6: Reverse a List**

**Scenario:** You are building a utility function for a data processing tool that needs to reverse the order of elements in a list.

**Description:** Write a script that reverses a given list lst.

**Sample Input:**

lst = [1, 2, 3, 4, 5]

**Sample Output:**

[5, 4, 3, 2, 1]

**Sample Input:**

lst = ['a', 'b', 'c']

**Sample Output**

['c', 'b', 'a']

**Problem 7: Character Frequency**

**Scenario:** You are creating a text analysis tool that provides statistics on character frequency in a given text.

**Description:** Write a script that counts the frequency of each character in a given string s.

**Sample Input:**

s = "abracadabra"

**Sample Output:**

{'a': 5, 'b': 2, 'r': 2, 'c': 1, 'd': 1}

**Sample Input:**

s = "hello"

**Sample Output:**

{'h': 1, 'e': 1, 'l': 2, 'o': 1}

**Problem 8: Merge Two Sorted Lists**

**Scenario:** You are working on a sorting algorithm that needs to merge two pre-sorted lists into a single sorted list.

**Description:** Write a script that merges two sorted lists lst1 and lst2 into one sorted list.

**Sample Input:**

lst1 = [1, 3, 5]

lst2 = [2, 4, 6]

**Sample Output:**

[1, 2, 3, 4, 5, 6]

**Sample Input:**

lst1 = [1, 2, 3]

lst2 = [4, 5, 6]

**Sample Output:**

[1, 2, 3, 4, 5, 6]

**Problem 9: Find Common Elements**

**Scenario:** You are building a feature for a social media application that finds common friends between two users.

**Description:** Write a script that finds the common elements between two lists lst1 and lst2.

**Sample Input:**

lst1 = [1, 2, 3, 4]

lst2 = [3, 4, 5, 6]

**Sample Output:**

[3, 4]

**Sample Input:**

lst1 = ['a', 'b', 'c']

lst2 = ['b', 'c', 'd']

**Sample Output:**

['b', 'c']

**Problem 10: Remove Duplicates from List**

**Scenario:** You are writing a data cleanup script that needs to remove duplicate entries from a list of items.

**Description:** Write a script that removes duplicates from a given list lst.

**Sample Input:**

lst = [1, 2, 2, 3, 4, 4, 5]

**Sample Output:**

[1, 2, 3, 4, 5]

**Sample Input:**

lst = ['a', 'b', 'a', 'c', 'd', 'd']

**Sample Output:**

['a', 'b', 'c', 'd']