

Assignment 3

Q1. Write a Python program that takes two lists as input and returns a new list containing the common elements between the two input lists?

Q2. Write a Python program that takes two strings as input and returns 'yes' if the first string is a substring of the second string and 'no' otherwise using comparison operators?

Q3. Write a Python program that takes two lists as input and returns a new list containing only the unique elements from both input lists using comparison operators?

Q4. Write a Python program that takes a list of strings as input and returns the longest string in the list using comparison operators?

Q5. Write a Python program that takes a set of strings as input and returns a new set containing only the strings with length less than or equal to 5?

Q6. Write a Python program that takes a set of numbers as input and returns a new set containing only the odd numbers in the original set?

Q7. Write a Python program that takes a dictionary as input and returns the key with the highest value?

Q8. Write a Python program that takes two sets as input and returns a new set containing the elements that are only in one of the input sets using comparison operators?

Q9. Write a Python program that takes a list of dictionaries as input and returns a new list containing only the dictionaries where the value of a specific key is equal to a certain value using comparison operators?

Q10. Write a Python program that takes a dictionary of strings as input and returns a new dictionary containing only the key-value pairs where the value is a string with length greater than 5?

Q11. Write a Python program that takes an integer as input and outputs the sum of the first n natural numbers using a for loop?

Q12. Write a Python program that takes a list of integers as input and outputs the second smallest integer in the list using a for loop?

Q13. Write a Python program that takes a list of strings as input and outputs the string with the most vowels using a for loop?

Q14. Write a Python program that takes an integer as input and determines whether the number is an Armstrong number or not. An Armstrong number is a number that is equal to the sum of its own digits raised to the power of the number of digits. For example, 153 is an Armstrong number because $1^3 + 5^3 + 3^3 = 153$?

Q15. Write a program to print first n prime numbers till a given limit by user. Ex - If the user has given the input as 50 so you need to show prime numbers till 50?