For Loop

Assignment Questions

PW SKILLS

Basic Level:

1. Write a Python program to print the numbers from 1 to 10 using a `for` loop.
2. Create a program that calculates the sum of all numbers in a list using a `for` loop.
3. Write a program to print the characters of a string in reverse order using a `for` loop.
4. Develop a program that finds the factorial of a given number using a `for` loop.
5. Create a program to print the multiplication table of a given number using a `for` loop.
6. Write a program that counts the number of even and odd numbers in a list using a `for` loop.
7. Develop a program that prints the squares of numbers from 1 to 5 using a `for` loop.
8. Create a program to find the length of a string without using the `len()` function.
9. Write a program that calculates the average of a list of numbers using a `for` loop.
10. Develop a program that prints the first `n` Fibonacci numbers using a `for` loop.

Intermediate Level:

11. Write a program to check if a given list contains any duplicates using a `for` loop.
12. Create a program that prints the prime numbers in a given range using a `for` loop.
13. Develop a program that counts the number of vowels in a string using a `for` loop.
14. Write a program to find the maximum element in a 2D list using a nested `for` loop.
15. Create a program that removes all occurrences of a specific element from a list using a `for` loop.
16. Develop a program that generates a multiplication table for numbers from 1 to 5 using a nested `for` loop.
17. Write a program that converts a list of Fahrenheit temperatures to Celsius using a `for` loop.
18. Create a program to print the common elements from two lists using a `for` loop.
19. Develop a program that prints the pattern of right-angled triangles using a `for` loop. Use '*' to draw the pattern
20. Write a program to find the greatest common divisor (GCD) of two numbers using a `for` loop.

Advanced Level:

21. Create a program that calculates the sum of the digits of numbers in a list using a list comprehension.
22. Write a program to find the prime factors of a given number using a `for` loop and list comprehension.
23. Develop a program that extracts unique elements from a list and stores them in a new list using a list comprehension.
24. Create a program that generates a list of all palindromic numbers up to a specified limit using a list comprehension.
25. Write a program to flatten a nested list using list comprehension.
26. Develop a program that computes the sum of even and odd numbers in a list separately using list comprehension.
27. Create a program that generates a list of squares of odd numbers between 1 and 10 using list comprehension.
28. Write a program that combines two lists into a dictionary using list comprehension.
29. Develop a program that extracts the vowels from a string and stores them in a list using list comprehension.
30. Create a program that removes all non-numeric characters from a list of strings using list comprehension.

Challenge Level:

31. Write a program to generate a list of prime numbers using the Sieve of Eratosthenes algorithm and list comprehension.
32. Create a program that generates a list of all Pythagorean triplets up to a specified limit using list comprehension.

33. Develop a program that generates a list of all possible combinations of two lists using list comprehension.
34. Write a program that calculates the mean, median, and mode of a list of numbers using list comprehension.
35. Create a program that generates Pascal's triangle up to a specified number of rows using list comprehension.
36. Develop a program that calculates the sum of the digits of a factorial of numbers from 1 to 5 using list comprehension.
37. Write a program that finds the longest word in a sentence using list comprehension.
38. Create a program that filters a list of strings to include only those with more than three vowels using list comprehension.
39. Develop a program that calculates the sum of the digits of numbers from 1 to 1000 using list comprehension.
40. Write a program that generates a list of prime palindromic numbers using list comprehension.