Dear student, these questions pertain to the topics we have covered, and the deadline for submission is before Wednesday. Please refrain from using ChatGPT or any assisting programs. Thank you.

1. Write a Python function to check if a given number is even or odd.
2. Create a Python program to find the sum of all numbers stored in a list.
3. Write a Python function to calculate the factorial of a number using recursion.
4. Implement a Python program to reverse a given tuple.
5. Write a Python function to find the maximum number in a list.
6. Create a Python program to print the Fibonacci sequence up to a specified number.
7. Write a Python function to check if a given string is a palindrome.
8. Implement a Python program to merge two lists into a single sorted list.
9. Create a Python program to count the number of occurrences of an element in a list.
10. Write a Python function to compute the greatest common divisor (GCD) of two numbers using recursion.
11. Implement a Python program to find the intersection of two lists.
12. Write a Python function to check if a given year is a leap year.
13. Create a Python program to find the factorial of a number without using recursion.
14. Write a Python function to generate all permutations of a

given list.

15. Implement a Python program to remove duplicates from a list.

16. Write a Python function to calculate the power of a number using recursion.

17. Create a Python program to sort a list of tuples based on the second element.

18. Write a Python function to find the sum of digits of a given number using recursion.

19. Implement a Python program to find the union of two lists.

20. Create a Python program to find the largest element in a list using a loop.

Feel free to ask if you need clarification on any of the questions or if you'd like me to provide sample solutions for any of them!