

# Practice Questions

1. Write a program to print all even numbers from 1 to 50.
2. Write a program to find the largest of three numbers.
3. Write a program to check if a number is prime or not.
4. Write a program to count the digits in a number.
5. Write a program to reverse a number.
6. Write a program to print multiplication table of a given number.
7. Write a program to find the sum of first N natural numbers.
8. Write a program to check if a character is a vowel or consonant.
9. Write a program to find the highest and lowest number in a list.
10. Write a program to check if a string is a palindrome.
11. Write a program to count vowels in a string.
12. Write a program to find the second largest number in a list.
13. Write a program to remove duplicates from a list.
14. Write a program to find the sum of digits of a number.
15. Write a program to find the frequency of each character in a string.
16. Write a program to calculate factorial using a function.
17. Write a program to print Fibonacci series up to N terms.
18. Write a program to check whether a number is an Armstrong number.
19. Write a program to merge two lists and sort them.
20. Write a program to check if two strings are anagrams.
21. Write a program to find the largest odd number in a list.
22. Write a program to replace all spaces in a string with hyphens.
23. Write a program to find the maximum occurring character in a string.
24. Write a program to check if a list is sorted or not. Write a program to print all prime numbers in a given range. Write a recursive function to find the sum of digits of a number.
25. Write a function to count how many prime numbers are in a list.
26. Write a program to capitalize the first letter of each word
27. Write a program to check if two strings have the same character frequency.
28. Write a program to find all duplicate elements in a list.
29. Write a program to print elements that appear only once in a list.
30. Print a diamond-shaped star pattern.
31. Write a program to find the most frequent element in a list.
32. Write a program to calculate the sum of all even-indexed and odd-indexed elements separately.
33. Write a program to calculate the difference between the largest and smallest number in a list.

## Added More Questions

1. Write a program using `math.sqrt()` to find the square root of a number taken from user input.
2. Write a question to compute the trigonometric values (`sin`, `cos`, `tan`) of an angle.
3. Use `math.pow()` to compute  $x^y$  for user inputs `x` and `y`.
4. Write a program to get the current working directory using the `os` module.
5. How do you list all files and folders inside a directory using `os.listdir()`?
6. Write a question to create a folder named "Backup" using `os.makedirs()`.
7. How can you check if a path exists using `os.path.exists()`?
8. Write a program to rename a file using `os.rename()`.
9. How do you copy a file from one location to another using `shutil.copy()`?
10. How can you delete a directory permanently using `shutil.rmtree()`?
11. Write a question to move a file from one folder to another using `shutil.move()`.
12. How can you check disk usage statistics using `shutil.disk_usage()`?
13. Write a program to print the current system time using `time.ctime()`.
14. How can you measure the execution time of a program using `time.time()`?
15. Write a question that uses `time.sleep()` to pause the program for 3 seconds.
16. How to convert a timestamp into readable format using `time.strftime()`?
17. How do you get the processor time using `time.process_time()`?
18. How can you add two integer command-line arguments and print their sum? Write a program to count total lines in a text file.
19. How do you write multiple lines into a file using a loop?
20. Write a question to append text at the end of an existing file.
21. How to read a file line-by-line using a `with open()` block? Write a question to show **multilevel inheritance** (Grandparent → Parent → Child).
22. Create a program that shows **multiple inheritance** with two parent classes.
23. Write a question where a child class overrides a parent class method.