Basic Level (1–8)

1. Write a Python program to display “Hello, Python!”.
2. Create three variables a, b, and c to store integer, float, and string values. Print their data types.
3. Input two numbers from the user and print their sum, difference, and product.
4. Given x = 10, y = 3, print the result of x // y, x % y, and x ** y.
5. Create a list of 5 numbers and print the first and last element.
6. Create a tuple of 4 colors and access the second color.
7. Create a set of numbers {1,2,3,3,4,5} and print the unique elements.
8. Create a dictionary with keys = name, age, city and print the value of the key city.

Intermediate Level (9–17)

9. Write a program to check if a number entered by the user is **even or odd**.
10. From a list [10, 20, 5, 25, 30], print the largest number using if-else statements.
11. Write a program using a for loop to print numbers from 1 to 10.
12. Use a while loop to calculate the sum of all numbers from 1 to 100.
13. Given a list [3, 7, 2, 8, 5], print only the even numbers using a loop.
14. Write a function add_numbers(a, b) that returns their sum.
15. Use the built-in function len() to count how many items are in a list fruits = ['apple', 'banana', 'cherry'].
16. Write a user-defined function that takes a list and returns the maximum and minimum values.
17. Write a program to check whether a string is a palindrome or not using a function.

Advanced Level (18–25)

18. Use a **lambda function** to find the square of a number.
19. Create a lambda function to return the maximum of two numbers.
20. Use the map() function to square all numbers in a list [1, 2, 3, 4, 5].
21. Use the filter() function to keep only even numbers from [1, 2, 3, 4, 5, 6].
22. Use the reduce() function (from functools) to calculate the product of all numbers in [2, 3, 4, 5].
23. Write a function that accepts a dictionary of student names and marks, and returns the name of the student with the highest marks.
24. Create a list of tuples containing student names and marks. Sort it by marks using a lambda function.
25. Write a Python program that combines all the above:

- Takes a list of numbers
- Filters only even numbers

- Squares them using map()
- Finds the total using reduce()