

### Assignment-1

1. Write a Python program to declare variables of different data types (int, float, string, bool) and print their values.
2. Take user input for name, age, and height, then print them with appropriate labels.
3. Assign a float value to a variable and convert it into an integer. Print both values.
4. Swap two numbers without using a third variable.
5. Check the data type of a given variable and print the result.
6. Convert a string "123" into an integer and add 10 to it.
7. Convert a float 45.67 into an integer and a string. Print all three versions.
8. Take user input as a string and convert it into an integer, handling possible errors.
9. Convert a list [1, 2, 3, 4] into a tuple and print it.
10. Convert a boolean value True into an integer and a string.
11. Write a program to compare two numbers and print whether they are equal, greater, or smaller.
12. Take three numbers as input and find the **largest among them** using comparison operators.
13. Use logical operators (and, or, not) to check whether a given number is **positive and even**.
14. Create a list with 5 elements and perform the following operations:
  - a) Print the first and last element.
  - b) Append a new element to the list.
  - c) Remove the second element.
  - d) Sort the list.
15. Create a list of 10 numbers and find the **sum** of all elements using a loop.
16. Write a program to check if a given element exists in a list or not.
17. Take a list of numbers and print only the even numbers.
18. Reverse a given list without using the built-in reverse() method.
19. Create a list of 5 numbers. Print the first and last elements using indexing.
20. Take a list of numbers and check if a specific number (user input) exists in the list.
21. Append a new element to a list, then remove an existing element from the same list.
22. Take a list of 10 numbers and print only the even numbers using a loop.
23. Reverse a given list without using the reverse() method.
24. Write a program to check if a list is empty or not.
25. Take a list of numbers and find the largest number using if-else.

26. Check if a given list contains only positive numbers or not.
27. Create a list of 5 integers. If the sum of the numbers is greater than 50, print "High", otherwise print "Low".
28. Write a program to take a list of numbers and categorize them as **positive, negative, or zero** using `if-elif-else`.
29. Find the second largest number in a given list.
30. Take a list of numbers and replace all negative numbers with zero.
31. Create a list of words and check if a specific word (user input) exists in the list.
32. Count how many times a specific number appears in a list.
33. Take two lists and check if they have any common elements.
34. Write a program to merge two lists and remove duplicates.
35. Sort a list in ascending order but place all odd numbers before even numbers.
36. Create a list of students' marks. If a mark is greater than 90, print "Excellent", if between 60-89 print "Good", otherwise print "Needs Improvement".
37. Write a program to check if a list is a palindrome (reads the same forward and backward).