1. Check if a String is a Palindrome

```
def is_palindrome(s):
    return s == s[::-1]
print(is_palindrome("madam"))  # Output: True
```

2. Find All Duplicates in a List

```
def find_duplicates(lst):
    return list(set([x for x in lst if lst.count(x) > 1]))
print(find_duplicates([1,2,2,3,4,4]))  # Output: [2, 4]
```

3. Count Frequency of Elements in a List

```
from collections import Counter
print(Counter(["apple", "banana", "apple", "orange"]))
```

4. Check if Two Strings are Anagrams

```
def is_anagram(a, b):
    return sorted(a) == sorted(b)
print(is_anagram("listen", "silent"))  # Output: True
```

5. Remove Vowels from a String

```
def remove_vowels(s):
    return ''.join([c for c in s if c.lower() not in 'aeiou'])
print(remove_vowels("hello world"))  # Output: hll wrld
```

6. Flatten a Nested List

```
def flatten(lst):
    return [item for sublist in lst for item in sublist]
print(flatten([[1,2],[3,4]]))  # Output: [1, 2, 3, 4]
```

7. Reverse Words in a Sentence

```
def reverse_words(s):
    return ' '.join(s.split()[::-1])
print(reverse_words("hello world"))  # Output: world hello
```

8. Find the Second Largest Number

```
def second_largest(nums):
    return sorted(set(nums))[-2]
print(second_largest([10, 20, 30, 40]))  # Output: 30
```

9. Check Armstrong Number

```
def is_armstrong(n):
    return n == sum(int(d)**len(str(n)) for d in str(n))
print(is_armstrong(153))  # Output: True
```

10. Generate a Fibonacci Series

```
def fibonacci(n):
    a, b = 0, 1
    for _ in range(n):
        print(a, end=' ')
        a, b = b, a + b
fibonacci(5)  # Output: 0 1 1 2 3
```

11. Find Missing Number in a List of 1 to N

```
def find_missing(lst, n):
    return n * (n + 1) // 2 - sum(lst)
print(find_missing([1,2,4,5], 5))  # Output: 3
```

12. Find Pairs with a Given Sum

```
def find_pairs(lst, target):
    seen = set()
    for num in lst:
        if target - num in seen:
            print((num, target - num))
        seen.add(num)
find_pairs([1,2,3,4,5], 6)  # Output: (3, 3) (4, 2) (5, 1)
```

13. Check Prime Number

```
def is_prime(n):
    if n < 2: return False
    for i in range(2, int(n**0.5)+1):
        if n % i == 0:
            return False
    return True
print(is_prime(7))  # Output: True
```

14. Sort Dictionary by Value

```
d = {'a': 3, 'b': 1, 'c': 2}
sorted_dict = dict(sorted(d.items(), key=lambda x: x[1]))
print(sorted_dict)  # Output: {'b': 1, 'c': 2, 'a': 3}
```

15. Capitalize First Letter of Each Word

```
def capitalize_words(s):
    return s.title()
print(capitalize_words("hello world"))  # Output: Hello World
```

16. Move All Zeros to End

```
def move_zeros(lst):
    return [x for x in lst if x != 0] + [0]*lst.count(0)
print(move_zeros([0,1,0,3,12]))  # Output: [1, 3, 12, 0, 0]
```

17. Count Vowels and Consonants

```
def count_vowels_consonants(s):
    v, c = 0, 0
    for ch in s.lower():
        if ch.isalpha():
            if ch in 'aeiou':
                v += 1
            else:
                c += 1
    return v, c
print(count_vowels_consonants("Hello World"))  # Output: (3, 7)
```

18. Sort List Without Using Sort Function

```
def bubble_sort(arr):
    n = len(arr)
    for i in range(n):
        for j in range(0, n-i-1):
            if arr[j] > arr[j+1]:
                arr[j], arr[j+1] = arr[j+1], arr[j]
    return arr
print(bubble_sort([4, 3, 2, 1]))  # Output: [1, 2, 3, 4]
```

19. Check Pangram

```
def is_pangram(s):
    return set('abcdefghijklmnopqrstuvwxyz') <= set(s.lower())
print(is_pangram("The quick brown fox jumps over the lazy dog"))  # Output: True
```

20. Count Words in a Sentence

```
def count_words(sentence):
    return len(sentence.split())
print(count_words("Python is awesome"))  # Output: 3
```

21. Transpose a Matrix

```
def transpose(matrix):
    return [list(row) for row in zip(*matrix)]
print(transpose([[1,2,3],[4,5,6]]))  # Output: [[1, 4], [2, 5], [3, 6]]
```

22. Find Intersection of Two Lists

```
def list_intersection(a, b):
    return list(set(a) & set(b))
print(list_intersection([1, 2, 3], [2, 3, 4]))  # Output: [2, 3]
```

23. Check if Number is Palindrome

```
def is_num_palindrome(n):
    return str(n) == str(n)[::-1]
print(is_num_palindrome(121))  # Output: True
```

24. Count Digits in a Number

```
def count_digits(n):
    return len(str(abs(n)))
print(count_digits(12345))  # Output: 5
```

25. Convert Integer to Binary Without Built-in Function

```
def to_binary(n):
    binary = ""
    while n > 0:
        binary = str(n % 2) + binary
        n //= 2
    return binary or "0"
print(to_binary(10))  # Output: 1010
```