Pattern Printing:

1. **Diamond Pattern:** Write a program to print a diamond pattern using asterisks (*) of a given height.
2. **Number Pyramid:** Print a pyramid pattern where each row contains consecutive numbers (e.g., 1, 12, 123, 1234...).
3. **Hollow Rectangle:** Create a program to print a hollow rectangle using asterisks with specified width and height.

Array Manipulation:

4. **Find Duplicate:** Given an array of integers with one duplicate, find the duplicate number in O(n) time and constant space.
5. **Merge Overlapping Intervals:** You are given an array of intervals, merge all overlapping intervals, and return the result which should have only mutually exclusive intervals.
6. **Rotate Array:** Rotate an array to the right by k steps in-place, with O(1) extra space.

String Manipulation:

7. **Check Palindrome:** Determine if a given string is a palindrome, ignoring spaces and punctuation.
8. **Valid Anagram:** Given two strings, determine if they are anagrams (contain the same characters in a different order).
9. **Reverse Words in a String III:** Reverse the letters of each word in a given string.

Algorithms:

10. **Two Sum II (Input Array is Sorted):** Given a sorted array of integers, find two numbers such that they add up to a specific target number. Return the indices of the two numbers.

- **Spiral Matrix:** Given a matrix of m x n elements (m rows, n columns), return all elements of the matrix in spiral order.
- **Valid Parentheses:** Given a string containing just the characters '(', ')', '{', '}', '[' and ']', determine if the input string is valid (parentheses are opened and closed in the correct order).
- **First Missing Positive:** Given an unsorted integer array, find the smallest missing positive integer.