**3.Longest substring without repeating**

int lengthOfLongestSubstring(char \*s) {

    int index[128] = {0};  // ASCII character index

    int maxLen = 0;

    int left = 0;

    for (int right = 0; s[right] != '\0'; right++) {

        char current = s[right];

        if (index[(int)current] > left) {

            left = index[(int)current];

        }

        int windowLen = right - left + 1;

        if (windowLen > maxLen) {

            maxLen = windowLen;

        }

        index[(int)current] = right + 1;

    return maxLen;

}