1. Count Vowels and Consonants

Question:
Write a program that counts how many vowels (`a, e, i, o, u`) and consonants are in a string.

Hint:

- Loop through each character of the string.
- Check if the character is a vowel using either **ASCII values** or direct comparison (`if char == 'a' || char == 'e' ...`).
- Keep separate counters for vowels and consonants.

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2. Remove Duplicate Characters

Question:
Write a program to create a new string that contains only the first occurrence of each character from the original string.

Hint:

- Loop through the string.
- For each character, check if it already exists in the new string.
- If not, add it to the new string.

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3. Check if All Characters are Lowercase

Question:
Write a program to check whether all characters in a string are lowercase letters.

Hint:

- Loop through the string.
- Use ASCII values: lowercase letters are `97–122`.
- If any character falls outside this range, the string is **not all lowercase**.

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4. Toggle Case of Each Character

Question:
Write a program that converts uppercase letters to lowercase and lowercase letters to uppercase **without using built-in methods**.

Hint:

- Loop through each character.
- Check if it's lowercase (`97–122`) → subtract 32 to make uppercase.
- Check if it's uppercase (`65–90`) → add 32 to make lowercase.
- Build a new string with the toggled characters.

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5. Reverse String and Remove Vowels

Question:
Write a program that first removes all vowels from a string, then reverses the resulting string.

Hint:

- Loop through the string and build a new string **without vowels**.
- Then loop backward through this new string to reverse it.
- Concatenate characters to create the final result.

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6. Encode String with Fixed ASCII Shift

Question:
Write a program to encode a string by shifting the ASCII value of each character **by 1**.

Hint:

- Loop through the string.
- Use `charCodeAt()` to get ASCII value.

- Add 1 to it.
- Use `fromCharCode()` to convert back to a character.
- Build a new encoded string.

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7. Encode String with Index-Based ASCII Shift

Question:
Write a program to encode a string by shifting the ASCII value of each character **by its index + 1**.

Hint:

- Loop through the string.
- Use `charCodeAt()` to get ASCII value.
- Add `(index + 1)` to the ASCII value.
- Convert back using `fromCharCode()`.
- Concatenate to form the new string.