LAB FAT SET-3

Q1. A residential water board charges customers based on the volume of water consumed during the billing period. The first **15 kiloliters (KL)** are charged at **₹2 per KL**, the next **20 KL** are charged at **₹5 per KL**, and any usage **above 35 KL** is charged at **₹10 per KL**. Every customer is also required to pay a **fixed service charge of ₹50**. Assume that no customer consumes a negative amount of water.

Write a script that calculates and displays the water bill for each household that submitted meter readings yesterday. You should accept from the user the number of kiloliters used for each household. The program should display the charge for the current household and should also calculate and display the running total of all bills generated.

The program must use a function **calculateBill()** to determine the charge for each household. Input should be obtained from the user through a text input field, and the script should validate that the user enters a non-negative numeric value.

Q2. Write a function named **normalizeText(fileName, mode)** that reads a text file and rewrites its content according to the following rules:

1. Replace all sequences of multiple spaces or tab characters with a single space.
2. Remove all leading and trailing spaces from every line.
3. If *mode = "compress"*:
    - Replace any sequence of blank lines with a single blank line.
4. If *mode = "expand"*:
    - Insert an empty line between every existing line of text.
5. Count and return the number of whitespace corrections performed.
6. Detect and report any lines containing only punctuation symbols.
7. Overwrite the original file with the corrected content.

For example:
A file containing irregular spacing, mixed tabs, and extra blank lines should be transformed into a clean, well-structured text based on the selected mode.

Note: mode argument in function is user defined not pre-defined.