BIM303 MICROCOMPUTERS
LAB EXPERIMENT #6

Objective(s)

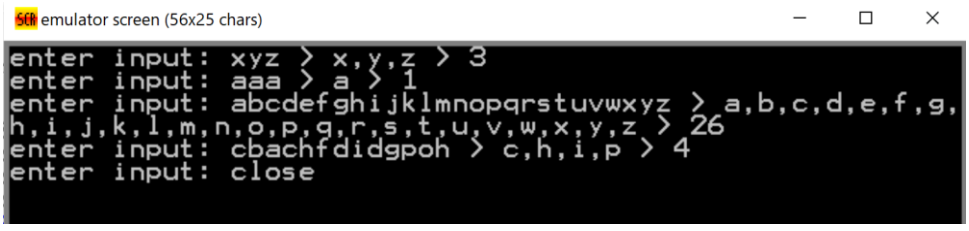
- Become familiar with **program control instructions**.

Lab Work

Write an assembly program which is able to get a text input and select characters according to an increasing alphabetical subsequence rule (English alphabet). Program must be able to run infinitely until user enters "close" as input. For example, for the given text "akcdbs", the result is "a, k, s > 3":
'a' → first character → selected
'k' → compared with last selected 'a' → k > a → selected
'c' → compared with last selected 'k' → c < k → not selected
'd' → compared with last selected 'k' → d < k → not selected
'b' → compared with last selected 'k' → b < k → not selected
's' → compared with last selected 'k' → s > k → selected

1. Get a text as an input using Emulator Screen. The program must only accept **lowercase letters (a–z)**. The program must check whether the entered character is a lowercase letter and if it is not, it must be **neither printed nor processed**. For example, if user enters "c*e2nSg" then the program must not print '*', '2', 'S' and print only "ceng". When the **Enter** key is pressed, the program must get the printed text as input and start processing.
2. When the program gets the input from the user, it must examine each character from left to right and apply the increasing alphabetical subsequence filter. A character is **selected** only if it is **alphabetically greater than the last selected character**. The selected characters are stored in a separate array.
3. Finally, the program prints the matched characters and the count of matched characters on Emulator Screen and waits for the new text until the new text is **"close"**.

Example:



Evaluation

- You must complete your work until lab hour. You will be evaluated during the lab session. **Your code should not contain any comment lines.**
- **NOTE:** Students who do not submit tasks through **ESTUOYS** will receive **0 (zero)** points. **Late submissions will not be accepted.**