

## Summary Report: Input/Output

### Objective:

The objective of this Python code is to capture keyboard input from the user, specifically focusing on numeric and alphabetic characters. The program uses the `curses` library to create a simple text-based interface to collect the user's input and display it in different categories: all key presses, numeric characters only, and alphabetic characters only. The code categorizes the input into distinct groups, including all key presses, numeric characters only, and alphabetic characters only. This user-friendly interface can be utilized in various applications, providing a foundation for collecting and processing specific types of user input efficiently.

### Key Components:

- **Function Definitions:** The code defines two functions, `numericKeyPresses` and `alphabetsKeyPresses`, which take a list of key presses and filter them to return numeric characters and alphabetic characters, respectively. These functions enhance code modularity and readability.
- **Curses Initialization:** The code initializes a curses screen using `curses.initscr()`. It also sets certain curses settings to capture user input while disabling automatic echoing of keypresses.
- **User Input Capture:** The program prompts the user to enter key combinations, with a message displayed at the beginning. It records the key presses until the Enter key is pressed, indicating the user has finished entering keys.
- **Filtering and Display:** The recorded key presses are then categorized into three groups: all key presses, numeric characters only, and alphabetic characters only. The filtered characters are displayed on the screen along with appropriate labels.
- **Curses Cleanup:** After the user interaction is complete, the code properly cleans up the curses environment using `curses.endwin()`.

## Usage:

This code can be used to capture and categorize keyboard input from the user in a text-based console environment. It is suitable for applications where specific types of user input need to be extracted and processed separately, such as numeric input, alphabetic input, or other specific patterns.

Overall, the code effectively achieves its objective of capturing and categorizing keyboard input using the `curses` library. It offers a foundation for building text-based applications that require specific user input processing.

## Screenshot

```

1  # Name: Harsh Siddhapura
2  # Enrollment No.: 1230169813
3
4  import curses
5  import os
6  import getpass
7  import datetime
8
9  Comment Code
10 def print_system_info():
11     # Get user data
12     os.system('clear') # os.system('clear') for Linux
13     username = getpass.getuser()
14     # Get computer information
15     computer_info = os.name
16     # Get current date and time
17     current_time = datetime.datetime.now()
18     # Format log message
19     log_message = f"User: {username}\nTime:{current_time}\nComputer Info: {computer_info}"
20     # Print log message
21     print(log_message)
22     print_system_info()
23
24 Comment Code
25 def numericKeyPresses(key_presses):
26     return [char for char in key_presses if char.isnumeric()]
27
28 Comment Code
29 def alphabetsKeyPresses(key_presses):
30     return [char for char in key_presses if char.isalpha()]
31
32 # Initialize a curses screen
33 stdscr = curses.initscr()
34 curses.noecho() # Disable automatic echoing of keypresses
35 stdscr.keypad(1) # Enable keypad mode
36
37 Press any keys combination of numeric and non-numeric characters (Press Enter to stop):
38 Key presses: a b c d e f g h i 1 2 3 4 5 6 7 8 9 j k l m n o p q r s t u v x y z
39
40 Only numeric characters: 123456789
41 Only alphabetic characters: abcdefghijklmnopqrstuvwxyz
  
```

Python Labs

EXPLORER

PYTHON LABS

- .venv
- Module-1
- Module-2
- Module-5/Lab-1
  - filtered\_output.py

Module-5 > Lab-1 > filtered\_output.py > numericKeyPresses

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PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS ...

zsh - Lab-1

```
User: harshsiddhapura
Time:2023-10-12 12:00:53.503577
Computer Info: posix
(.venv) harshsiddhapura@Harshs-MacBook-Air Lab-1 %
```

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