

## Exercise 1 (1/4)

- Write a C program `ex1.c` that gets keyboard events directly from the keyboard device and prints them to stdout.

Note: Try exploring

`/dev/input/by-path/platform-i8042-serio-0-event-kbd`

## Exercise 1 (2/4)

- You have to use the file `/dev/input/by-path/platform-i8042-serio-0-event-kbd` (or a similar keyboard event character device file) for capturing keyboard events. You should endlessly read from the file to get all events
- You should use the `input_event` structure from `linux/input.h`<sup>1</sup>
- Only **PRESSED**, **REPEATED** and **RELEASED** events should be handled.
- Print the output events in format: **PRESSED 0x0023 (35)**
  - Where **PRESSED** - type of event, **0x0023** and **(35)** are hex and decimal representation of event code respectively.
- The program should be executed using `sudo` permission.
- The program should be terminated by pressing `E+X`.
- Print and save the output to `ex1.txt`
- Save the code in `ex1.c`

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<sup>1</sup><https://www.kernel.org/doc/Documentation/input/input.txt>

## Exercise 1 (3/4)

- Modify previous program to output shortcuts:  $P+E \rightarrow$  “I passed the Exam!”,  $C+A+P \rightarrow$  “Get some cappuccino!” and one custom shortcut of your choice.

## Exercise 1 (4/4)

- The program should print on the specified shortcuts in addition to the output events (“PRESSED”, “RELEASED”, “REPEATED”).
- Create the shortcut of your choice with custom message. The number of keys should be at least 2 and no more than 6.
- Print the available shortcuts at start of the program.
- Print and append the output to `ex1.txt`.
- Submit `ex1.txt` and `ex1.c`.
- The source code in `ex1.c` should be well-documented and explained.