**Coding challenge**

A Rust program is needed which prints the contents of a text file to standard output, with contiguous line numbers prepended to each printed line, e.g.

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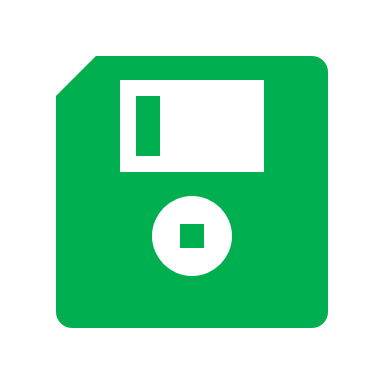
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**myfile.txt**

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**Design notes**

* The filename may be either passed as a command line argument or input via the keyboard by the user
* Your program must trap common errors and display appropriate messages, e.g. if file not found or no filename has actually been supplied (command line only)
* Line numbers should be printed in a zero-padded uniform width to prevent the common “barber’s pole” effect on-screen.

**Extension task:**

* Our code uses EAFP (easier to ask for forgiveness than permission) principles rather than LBYL (look before you leap). Rewrite this code so that Rust’s library checks to see of the chosen pathname exists before trying to open it, thereby avoiding raising an error.

Hint: <https://doc.rust-lang.org/std/path/struct.Path.html>