

XOR

Problem ID: a09p07xor

Write a program that:

1. Prompts the user for a file name.
2. Opens the file in binary mode, using the "rb" mode of the `open` function.
 - If the file does not exist, then the program should print "No file named {file name} could be found".
3. Calculates an XOR checksum by performing byte-wise XOR operations for every byte in the file.
4. Prints out "The checksum is <checksum>" where <checksum> is a single byte in hexadecimal format (e.g. xB2).

Example: Let's assume that the file `a.bin` contains three bytes:

- `0x01`, `0x02` and `0x01`.

Then the XOR checksum is:

- `0x01 ^ 0x02 ^ 0x01 = 0x02`.

Input

Input consists of:

1. A filename containing the binary file to be processed.

Output

Output consists of:

1. The XOR checksum of the binary file, presented as a single byte in hexadecimal format.

Sample Input 1

random.bin	The checksum is x96
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Sample Output 1

Sample Input 2

cancel.bin	The checksum is x5b
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Sample Output 2

Sample Input 3

empty.bin	The checksum is x00
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Sample Output 3

Sample Input 4

doesnotexist.bin	No file named doesnotexist.bin could be found
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Sample Output 4