Restorable Backspace

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These are **wrong** characters → These are **right** characters

How would you correct them?

1. **Backspace only**

   These are **wrong** characters

   backspace key * 16

   These are **<**

   Type **right** characters

   (16 keystrokes)

   These are **right** characters

   32 keystrokes


2. **With Restorable Backspace**

   These are **wrong** characters

   backspace key * 16

   These are **<**

   Type **right** characters

   (8 keystrokes)

   These are **right ch<aracters**

   Accept it by the TAB key (1 keystroke)

   These are **right** characters

   25 keystrokes

   **7 keystrokes are saved!**

HOW DOES IT WORK?

Text input:

Typed characters are wrong characters

Backspace buffer:

Typed characters are | wrong characters

Correcting keystrokes

Typed characters are right ch<aracters

Restore command (tab key or swipe gesture)

Typed characters are right characters

Restoration algorithm

Start

chunk ← last k characters of inputted
[chunk="ch" for k=2]

Find all occurrences of chunk in buffered

chunk in buffered?

Yes

Among all occurrences of chunk, find one that has the smallest MSD between 1 and 2:

1. buffered ["wrong characters"]
2. inputted + (buffered after chunk) ["right ch" + "aracters"]

restorable ← (buffered after chunk)

No

No suggestion

Suggest restorable ["aracters"]

32 keystrokes

25 keystrokes

7 keystrokes are saved!