

458 The Decoder

Write a complete program that will correctly decode a set of characters into a valid message. Your program should read a given file of a simple coded set of characters and print the exact message that the characters contain. The code key for this simple coding is a one for one character substitution based upon a *single arithmetic manipulation* of the printable portion of the ASCII character set.

Input and Output

For example: with the input file that contains:

```
1JKJ'pz'{ol}'{yhklthyr}'vm'{ol}'Jvu{yvs'Kh{h'Jvywvyh{pvu5
1PIT'pz'h}'{yhklthyr}'vm'{ol}'Pu{lyuh{pvuhs'I|zpulzz'Thjopul'Jvywvyh{pvu5
1KLJ'pz'{ol}'{yhklthyr}'vm'{ol}'Kpnp{hs'Lx|pwtlu{'Jvywvyh{pvu5
```

your program should print the message:

```
*CDC is the trademark of the Control Data Corporation.
*IBM is a trademark of the International Business Machine Corporation.
*DEC is the trademark of the Digital Equipment Corporation.
```

Your program should accept all sets of characters that use the same encoding scheme and should print the actual message of each set of characters.

Sample Input

```
1JKJ'pz'{ol}'{yhklthyr}'vm'{ol}'Jvu{yvs'Kh{h'Jvywvyh{pvu5
1PIT'pz'h}'{yhklthyr}'vm'{ol}'Pu{lyuh{pvuhs'I|zpulzz'Thjopul'Jvywvyh{pvu5
1KLJ'pz'{ol}'{yhklthyr}'vm'{ol}'Kpnp{hs'Lx|pwtlu{'Jvywvyh{pvu5
```

Sample Output

```
*CDC is the trademark of the Control Data Corporation.
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```