

Problem A: Quicksum

Source file: quicksum.{c, cpp, java}

Input file: quicksum.in

A checksum is an algorithm that scans a packet of data and returns a single number. The idea is that if the packet is changed, the checksum will also change, so checksums are often used for detecting transmission errors, validating document contents, and in many other situations where it is necessary to detect undesirable changes in data.

For this problem, you will implement a checksum algorithm called Quicksum. A Quicksum packet allows only uppercase letters and spaces. It always begins and ends with an uppercase letter. Otherwise, spaces and letters can occur in any combination, including consecutive spaces.

A Quicksum is the sum of the products of each character's position in the packet times the character's value. A space has a value of zero, while letters have a value equal to their position in the alphabet. So, A=1, B=2, etc., through Z=26. Here are example Quicksum calculations for the packets "ACM" and "MID CENTRAL":

$$\text{ACM: } 1*1 + 2*3 + 3*13 = 46$$

$$\text{MID CENTRAL: } 1*13 + 2*9 + 3*4 + 4*0 + 5*3 + 6*5 + 7*14 + 8*20 + 9*18 + 10*1 + 11*12 = 650$$

Input: The input consists of one or more packets followed by a line containing only # that signals the end of the input. Each packet is on a line by itself, does not begin or end with a space, and contains from 1 to 255 characters.

Output: For each packet, output its Quicksum on a separate line in the output.

Example Input:	Example Output:
ACM	46
MID CENTRAL	650
REGIONAL PROGRAMMING CONTEST	4690
ACN	49
A C M	75
ABC	14
BBC	15
#	

Last modified on October 29, 2006 at 3:55 PM.