ICE CREAM SHOP

In an ice cream shop, normally, 3 employees work and each of them serves a different age group; elders, children and adults. Besides, they serve these different age groups from different payment points because each of these groups has different discount rates which are only valid at a specified one of these payment points.

However, 2 of the employees are unable to work today because of their health problems. Therefore, the remaining employee should also take place of the others and serve all the different age groups at their designated payment points. While doing this, he is repeatedly commanded by his boss to serve a specific number of customers from the beginning of either elders', children's or adults' queue. The employee continues to work by repeating this process until his shift is over while new customers arrive and queue up in their appropriate age group queues. At the end of the employee's shift, he prints a daily report of served customers.

EXPERIMENT TASKS

In this experiment, you are expected to develop a program that deals with services and report printing of the ice cream shop. Your program should read a text-based input file (named as "input.txt") whose lines correspond to commands that should be executed.

Commands

You may assume that each line will have a single command and that all command names and command parameters will be tab-separated.

• **NewCustomer:** Adds a customer to the specified age group queue. The format of this command is:

NewCustomer <customer_age_group> <customer_name>
<customer_age_group> indicates the age group of the new customer and can be one these values: "E" for elders, "C" for children and "A" for adults. <customer_name> indicates the name of the customer and can be a string having 10 alphabetic characters at most.
Examples:

NewCustomer E Ramiz
NewCustomer C Elif
NewCustomer A Hakan

This command has no output, so do not print anything to the screen or do not write anything to the output file.

• **ServeCustomers:** Serves a specified number of customers from the beginning of the specified age group queue. The format of this command is:

ServeCustomers <customer_age_group> <number_of_customers>
<customer_age_group> indicates the age group of the customers to serve and can be one these values: "E" for elders, "C" for children and "A" for adults. <number_of_customers> indicates the number of the customers to serve and can be a positive integer.
Examples:
ServeCustomers E 1
ServeCustomers C 3
ServeCustomers A 2
This command has no output, so do not print anything to the screen or do not write anything to the output file. Nevertheless, while executing this command, you should record the information of each served customer, to be able to print them into the daily report. You can simply record

age group and name of each customer served. However, the specified age group queue may be or may become empty while executing this command. In such a case, for each unsuccessful serve attempt, you can simply record the specified age group by the command and "*****" instead of the customer name.

Daily Report

When your program finished executing all of the commands given in the input file, it should print the daily report of served customers to a text-based output file (named as "output.txt") and then it should terminate. This daily report should include age groups ("E" for elders, "C" for children and "A" for adults) of the customers served and their names in a tab-separated format. The format of each daily report line is:

<customer_age_group> <customer_name>

It should start from the last served customer and continue towards the first one and each customer's information should be printed as a new line.

Example:

(*Assuming that the previously given sample commands are executed in the order they are given.*)

A *****
A Hakan
C *****
C *****
C Elif
E Ramiz

SAMPLE INPUT & OUTPUT

A sample input and its corresponding output is given below:

Input	**Output**
ServeCustomers E 1	A Nermin
ServeCustomers C 2	C *****
ServeCustomers A 1	C Filiz
NewCustomer E Ramiz	C Tuna
NewCustomer C Elif	C Cenk
NewCustomer A Hakan	C Seher
ServeCustomers E 2	C Tuna
NewCustomer C Tuğba	C Kerem
NewCustomer C Akın	C Nisa
NewCustomer E Mahmut	C Nihat
NewCustomer A Nermin	C Aslı
ServeCustomers C 3	C Selim
NewCustomer E Hatice	C Işıl
ServeCustomers A 1	E Kamil
NewCustomer C Işıl	E Hatice
NewCustomer C Selim	E Mahmut
NewCustomer E Kamil	A Hakan
NewCustomer E Melahat	C Akın
ServeCustomers E 2	C Tuğba
ServeCustomers E 1	C Elif
NewCustomer C Aslı	E *****
NewCustomer C Nihat	E Ramiz
NewCustomer C Nisa	A *****
NewCustomer C Kerem	C *****
NewCustomer C Tuna	C *****
NewCustomer C Seher	E *****
NewCustomer C Cenk	
NewCustomer C Tuna	
ServeCustomers C 1	
NewCustomer C Filiz	
ServeCustomers C 10	
ServeCustomers C 1	
ServeCustomers A 1	