Magic: The Gathering (*MTG*) is a famous card game designed by Richard Garfield and released by Wizards of the Coast (WoC). In recent years, WoC has dedicated to develop a platform for playing *MTG* on computers and mobile devices. To accomplish this, WoC tries to store their cards in a text file. However, to ease the computation of the cards in computer, we need to prepare data structures as a container to store the cards.

By using the structure, we can easily sort our data according to the attributes defined by the structure members through standard library function qsort:

```
void qsort (void* base, size_t num, size_t size, int (*compar)(const void*,const void*));
```

`Base` is the pointer to the head of our structure array, `num` is the number of elements to be sorted, `size` is the size of the structure, and `compar` is a function determining the relations of two elements. In the compar function, you have to 1. cast the parameters to the data type you want to sort, and 2. compare them according to your reference.

Try to write a program reading decks and output them in a sorted manner.

Requirement: use array of structure to store and sort the data.

Input

The input has several cases and ends with 0. Each case contains an integer n, denoting the number of cards of the deck, and n lines of cards, each of which has ten fields. The ten fields are: card Name, cost of Colorless mana, cost of White mana, cost of Red mana, cost of Green mana, cost of Blue mana, cost of Black mana, Type, Power, and Toughness.

Output

Prepare a structure to store the input. Output the records according to the format shown in the sample output. Two consecutive decks are separated by a newline character. Output the ten fields in the same order of the input. Two consecutive fields are separated by three spaces, except the fields Name and Type, where they are followed by 24 and 18 spaces, respectively. All the field values are aligned right except Name and Type which are aligned right.

Sample Input

```
4
Subira Tulzidi Caravanner          2       0       1       0       0       0   Legendary Creature          2           3
Enthralling Hold                   3       0       0       0       2       0   Enchantment                 0           0
Wildwood Patrol                    2       0       0       1       0       0   Creature                    4           2
Fiery Emancipation                 3       0       3       0       0       0   Enchantment                 0           0

0
```

Sample Output

```
Fiery Emancipation                 3       0       3       0       0       0   Enchantment                 0           0
Subira Tulzidi Caravanner          2       0       1       0       0       0   Legendary Creature          2           3
Wildwood Patrol                    2       0       0       1       0       0   Creature                    4           2
Enthralling Hold                   3       0       0       0       2       0   Enchantment                 0           0
```