Froggy Squad

Create a program that helps you keep track of the **frogs** that are on the riverside. Because you are an extreme animal lover, you also name them. You will **receive** the **names of the frogs** that are already on the riverside on a **single line, separated** by a **single space** in the following format:

"{frog$_1$} {frog$_2$} {frog$_3$}… {frog$_n$}"

Then you will receive commands that describe their action. There are **five possible commands**:

- **"Join {name}":**
  - A frog **comes** on the riverside and you need to **add** it in the **end** of your **collection**. Frog names will **never repeat**.
- **"Jump {name} {index}"**
  - A frog **jumps out** of the water and **joins** the other frogs. You need to **add** it in your **collection on the given index, if** the **index exists**.
- **"Dive {index}":**
  - The **frog on the given index** has decided to **jump into the water**. You have to **remove** it from your **collection, if** the **index exists**.
- **"First/Last {count}":**
  - Print the **first/last {count}** frogs separated by a **single space**. If the **count** requested is **more than the frogs**- just **print them to the end**.
    "{frog} {frog} {frog}"
- **"Print Normal/Reversed"**
  - **Print** the **names** of the frogs in your **collection** in **normal** (in the order they have been added) or **reversed order** in the **format** described **below**, then **stop the program**:

"Frogs: {frog$_1$} {frog$_2$}… {frog$_n$}"

Input

- On the **1st line**, you will receive the **starting list** with the **names of the frogs separated** by a **single space**.
- On the **next lines**, you will receive commands in the **format described** above**.**

Output

- Print the **list after** the **manipulations upon the "Print" command** in the **format described** above.

Examples

Input	Output
Blake Muggy Kishko Join Kvachko Dive 0 First 10 Print Reversed	Muggy Kishko Kvachko Frogs: Kvachko Kishko Muggy

Comments	

First, we receive the "**Join Kvachko**" command, so we add the frog in the end of the collection.

Then, we receive the command "**Dive 0**", so we remove the frog on index 0.

Also, we receive the command "**First 10**", which is more than the frogs we have, so we print all frogs instead.

Lastly, we have to **print** the collection in **reversed**, so our output is: "**Frogs: Kvachko Kishko Muggy".**

A B C D E F Join G Jump Q 3 Last 3 Dive 2 Print Normal	E F G Frogs: A B Q D E F G