



## Gift Giving

**Input file:** gift.in

**Output file:** gift.out

**Source Code:** gift.pas/.c/.cpp

**100 points**

**Time limit: 1sec**

**Memory limit: 16 MB**

You and your classmates have decided to give gifts to each other. Each student has expressed her/his wish, by naming exactly one other student, whom she/he wants to present a gift. You realized, however, the chance that some students may get no gift at all, while others would receive more than one.

### Task

You are to write a program that computes the “gift giving and getting” party of students, i.e. the largest subset of selected students who will get exactly one gift from another selected student.

### Input

The first line of the text file `gift.in` contains a single integer,  $N$  ( $2 \leq N \leq 1\,000\,000$ ), the number of students. Students are identified by the numbers from  $1$  to  $N$ . The second line contains exactly  $N$  integers, specifying the wishes. The  $i$ th number,  $S_i$ , is the identifier of the student, whom the  $i$ th student wants to present a gift ( $S_i \neq i$ ).

### Output

The first line of the text file `gift.out` contains a single integer,  $M$ , the number of the elements of the largest subset of selected students, i.e. students who belong to the “gift giving and getting” party. The second line contains  $M$  integers in increasing order, the identifiers of the students who belong to that party.

### Example

| gift.in                        | gift.out      |
|--------------------------------|---------------|
| 13                             | 6             |
| 2 4 2 5 6 7 4 7 10 12 10 13 12 | 4 5 6 7 12 13 |