Exercises — Seq

version #

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Contents

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1 Seq

Files to submit:

- seq/seq.sh

Authorized commands:

- builtins

1.1 Goal

You have to write a shell script allowing to generate ranges of numbers. The expected usage is:

```
42sh$ ./seq.sh FIRST INCREMENT LAST
```

If the number of arguments is not correct, the script has to return `1` and display the usage on the standard error output (see examples).

The arguments `FIRST`, `INCREMENT` and `LAST` will always be integers and can be negative. However, `INCREMENT` must be strictly positive if `LAST` > `FIRST` and strictly negative otherwise. If this is not the case, the script should not display anything and return 1.

The script returns 0 in every other case.

- If `FIRST` = `LAST`, you must display `FIRST` and the script must return `0`.
- If `LAST` > `FIRST`, you must display the numbers n in ascending order, such that:
  - `FIRST` $\leq n \leq$ `LAST`
  - $n =$ `FIRST` $+ i \times$ `INCREMENT` $(\forall i \in \mathbb{N}, i \geq 0)$
- If `FIRST` > `LAST`, you must display the number n in descending order, such that:
  - `LAST` $\leq n \leq$ `FIRST`
  - $n =$ `FIRST` $+ i \times$ `INCREMENT` $(\forall i \in \mathbb{N}, i \geq 0)$

For more details about the behavior of the script, take a look at the following examples:

1.2 Examples

```
42sh$ ./seq.sh 1 -1 1
1
42sh$ ./seq.sh 42 -1 42
42
42sh$ ./seq.sh 42 -2 40
42
40
42sh$ ./seq.sh 10 3 23
10
13
16
```

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```
19
22
42sh$ ./seq.sh 42
Usage: ./seq.sh FIRST INCREMENT LAST
42sh$ echo "$?"
1
42sh$ ./seq.sh 3 2 1
42sh$ echo "$?"
1
```

It is my job to make sure you do yours.