Exercise 12

Objectives

The goal of this assignment is to learn how to handle classes related to numbers and strings in the Java programming language. Note that one of the objectives of the exercises is to develop the ***practice*** of problem solving by examining the API, even though some parts are not explained in detail in the lecture.

A: Adder [1 pt]

Create a program, Adder.java, that adds all the numbers entered as arguments from the command line and outputs the sum of the numbers.

For example, the program could be executed by

```
java Adder 1 3 2 10
```

and outputs

```
16
```

to the standard output. Your program should allow an arbitrary number of arguments to be entered.

Submission Files	Types
`Adder.java`	`Java Class`

B: Extracting a Character and Appending Characters [2 pt]

Create a program, ComputeInitials.java, that takes a name (string) specified by " " as an argument from the command line and outputs its initials.

For example, the program could be executed by

```
java ComputeInitials "Momo Taro"
```

and outputs

```
My initials are: MT
```

to the standard output.

Submission Files	Types
ComputeInitials.java	Java Class

C: Ring [3 pt]

Write a program which finds a pattern *p* in a ring shaped text *s*.

Input

In the first line, the text *s* is given. In the second line, the pattern *p* is given. Note that 1 ≤ length of *p* ≤ length of *s* ≤ 100, and *s* and *p* consists of lower-case letters

Output

If *p* is in *s*, print Yes in a line, otherwise No.

Sample Input/Output

Sample Input	Sample Output
vanceknowledgetoad advance	Yes
vanceknowledgetoad advanced	No

You can check if your program has been accepted or rejected by submitting your code to AOJ: https://onlinejudge.u-aizu.ac.jp/courses/lesson/2/ITP1/8/ITP1_8_D

Note: the class name of the program to be submitted to AOJ is Main

Submission Files	Types
Ring.java	Java Class

D: Transformation [4 pt]

Write a program which performs a sequence of commands to a given string *str*. The command is one of:

- print a b: print from the a-th character to the b-th character of *str*
- reverse a b: reverse from the a-th character to the b-th character of *str*
- replace a b p: replace from the a-th character to the b-th character of *str* with p

Note that the indices of *str* start with 0.

Input

In the first line, a string *str* is given. *str* consists of lowercase letters. In the second line, the number of commands *q* is given. In the next *q* lines, each command is given in the above mentioned format. Note that:

- 1 ≤ length of *str* ≤ 1000
- 1 ≤ *q* ≤ 100
- 0 ≤ a ≤ b < length of *str*
- for replace command, b−a+1= length of p

Output

For each print command, print a string in a line.

Sample Input/Output

Sample Input	Sample Output
abcde 3 replace 1 3 xyz reverse 0 2 print 1 4	xaze
xyz 3 print 0 2 replace 0 2 abc print 0 2	Xyz abc

You can check if your program has been accepted or rejected by submitting your code to AOJ: https://onlinejudge.u-aizu.ac.jp/courses/lesson/2/ITP1/9/ITP1_9_D

Submission Files	Types
Transformation.java	Java Class