Evaluate Expression

Problem | Submissions | Leaderboard | Discussions

Write a C program to evaluate an arithmetic expression in postfix form. Given that the operands are single digit integers and the allowed operators are *, /, %, +, -. Note that parentheses are never needed. The result of division should be truncated to the lowest integer. If the expression is not valid, then print "Not Valid".

You are required to implement a stack using linked list.

Input Format

One line of input contains a strinng, S, the expression to be evaluated.

Constraints

- 1 <= S.length <= 10^4

Output Format

Print the result after evaluating the expression.

Sample Input 0

```
56+4*
```

Sample Output 0

```
44
```

Explanation 0

((5 + 6) * 4) = 44

Sample Input 1

```
879/+
```

Sample Output 1

```
8
```

Explanation 1

(8 + (7 / 9)) = 8

Queue Operations

Problem | Submissions | Leaderboard | Discussions

Assume that you have to implement a queue-baed program. The program should take as input, number of operations Q. Each operation can be one of the below.

- **1 E** -Add an element E into the queue.
- **2** -Remove an element from the queu.
- **3** -Print the elements of the queue in one line.

You have to implement a function for each operation and print the elements when requested in a FIFO manner. If the queue is empty and you operation is 3, then print "Empty".

Input Format

The first line of input contains an integer, Q. The next Q lines each contains an operation like the mentioned above.

Constraints

- 1 <= Q <= 10^6
- 1 <= E <= 10^9

Output Format

Print the elements of queue separated by a comma (,) when requested.

Sample Input 0

```
10
1 5
2
1 43
1 20
1 50
3
1 84
2
1 2
3
```

Sample Output 0

```
43,20,50
20,50,84,2
```

Sample Input 1

```
5
1 100
1 43
2
1 200
3
```

Sample Output 1

```
43,200
```

Convert to Base N [BONUS]

Problem | Submissions | Leaderboard | Discussions

This is a BONUS problem. You have to pass all the tests to get the bonus marks.

Write a **recursive** program to covert an integer, X, from base 10 to another base, N. Your program should read the integer and the base as inputs. The recursive function should print the number in the new base.

Input Format

One line of input contains two integers, X and N.

Constraints

- 1 <= X <= 10^9
- 2 <= N <= 16

Output Format

Print the number in the new base after conversion.

Sample Input 0

```
13 2
```

Sample Output 0

```
1101
```

Sample Input 1

```
100000 16
```

Sample Output 1

```
186A0
```