B. Seasons

You are given a name of a month. Output the season of the year to which it belongs (based on Northern hemisphere).

Input

The input consists of a single string containing the name of one of the twelve months (January, February, March, April, May, June, July, August, September, October, November or December). The string is capitalized as given here.

Output

Output a single string — the season of the year to which the given month belongs (winter, spring, summer or autumn). The name of the season should be in lowercase.

Examples

input
April
output
spring

input
November
output
autumn

Note

Assume that winter is December through February, spring is March through May, summer is June through August and autumn is September through November.