

D. Greg and Caves

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Greg has a pad. The pad's screen is an $n \times m$ rectangle, each cell can be either black or white. We'll consider the pad rows to be numbered with integers from 1 to n from top to bottom. Similarly, the pad's columns are numbered with integers from 1 to m from left to right.

Greg thinks that the pad's screen displays a cave if the following conditions hold:

- There is a segment $[l, r]$ ($1 \leq l \leq r \leq n$), such that each of the rows $l, l + 1, \dots, r$ has exactly two black cells and all other rows have only white cells.
- There is a row number t ($l \leq t \leq r$), such that for all pairs of rows with numbers i and j ($l \leq i \leq j \leq t$) the set of columns between the black cells in row i (**with the columns where is these black cells**) is the subset of the set of columns between the black cells in row j (**with the columns where is these black cells**). Similarly, for all pairs of rows with numbers i and j ($t \leq i \leq j \leq r$) the set of columns between the black cells in row j (**with the columns where is these black cells**) is the subset of the set of columns between the black cells in row i (**with the columns where is these black cells**).

Greg wondered, how many ways there are to paint a cave on his pad. Two ways can be considered distinct if there is a cell that has distinct colors on the two pictures.

Help Greg.

Input

The first line contains two integers n, m — the pad's screen size ($1 \leq n, m \leq 2000$).

Output

In the single line print the remainder after dividing the answer to the problem by 1000000007 ($10^9 + 7$).

Examples

input
1 1
output
0

input
4 4
output
485

input
3 5
output
451