Forest Fire Task

You are given a map of a forest represented as a grid of characters. Your goal is to determine **how many turns it takes for fire to reach the house**.

Map Legend

Symbol	Meaning
^	Tree (burnable)
.	Ground (non-burnable)
~	Water (non-burnable)
F	Starting fire source (there may be multiple)
H	House (target)

Fire Spread Rules

The fire spreads **turn by turn**:

1. In **each turn**, every burning cell spreads fire to all 8 **neighboring cells** (horizontal, vertical, and diagonal).
2. Fire can **only spread onto trees** (**^**).
3. Fire **does not spread** onto ground or water.

Wind Effect

The wind causes the fire to spread **faster** in one direction.
The wind is given as one character: N, S, W, or E.

In addition to normal spreading:

- In the direction of the wind, the fire spreads **an extra** 1 **cells in that direction**.
- The direction of the wind means the direction from which the wind is blowing
- These extra spread steps also apply **only onto trees** (**^**).
- Fire **cannot directly skip onto the house due to wind**. The house must be reached from an adjacent burning cell in a normal spread step.
- The wind effect is applied AFTER the normal spreading of the fire

Return Value

- If the fire reaches the house → return the **number of turns** it takes.
- If the fire never reaches the house → return 0.
- If a fire source is already adjacent to the house at the start → return 1.

Input Format

Request Body (JSON):

{

"map": "string with newline-separated rows",

"wind": "N | S | W | E"

}

Example:

{

"map":

"~~~~~~~~~~\n~^^^^^^^. ~\n~. F^^^^^. ~\n~. . ^^^^^^~\n^^^^^^^^^~\n~. . . . . ~\n~. . F. H. . . ~\n~. ^^^. . . . ~\n~ . . . . . ~\n~~~~~~~~~~"

,

"wind": "N"

}

Output Format

- A single integer: the number of turns until the fire reaches the house.

Example response: