

Cody Problem 92. Find state names that start with the letter N

Given a list of US states, remove all the states that start with the letter N, leaving surrounding spaces intact. For example:

If

```
% s1 = 'Alabama Montana Nebraska Vermont Nevada';
```

then

```
% s2 = 'Alabama Montana Vermont ';
```

Notice that the spaces before and after "Nebraska" in **s1** still remain between "Montana" and "Vermont" in **s2**. The same applies for the space before "Nevada".

Be mindful of two-word states that also start with the letter N, like "New York" or "North Carolina". For example:

If

```
% s1 = 'Alabama Montana New York Vermont';
```

then

```
% s2 = 'Alabama Montana Vermont';
```

Notice that the spaces before and after "New York" in **s1** still remain between "Montana" and "Vermont" in **s2**.

Scratch Pad

```
s1 = 'North Carolina Tennessee Texas Nebraska Maine';
```

```
s2 = ' Tennessee Texas Maine';  
refcn(s1)
```

```
ans =  
' Tennessee Texas Maine'
```

```
assert(isequal(s2,refcn(s1)))
```

Solution

```
function s2 = refcn(s1)  
    % Regular expression to match a word or spaces  
    regexp = '(\S+|\s+)';  
    % Use regexp to find matches  
    matches = regexp(s1, regexp, 'match');  
  
    % Initialize an empty cell array for the results  
    result = {};  
    i = 1;
```

```

% Iterate over the matches
while i <= numel(matches)
    word = matches{i};

    % Check for 'New' or 'North' at the start of a word
    if contains(word, 'New') || contains(word, 'North')
        i = i + 3; % Skip this word and the next one
        continue;
    end

    % Check for words starting with 'n' or 'N'
    if startsWith(word, 'n', 'IgnoreCase', true) && ...
        ~contains(word, 'New', 'IgnoreCase', true) && ...
        ~contains(word, 'North', 'IgnoreCase', true)
        i = i + 1; % Skip this word
        continue;
    end

    % Add the word to the result
    result{end+1} = word;
    i = i + 1;
end

% Join the result into a single string
s2 = strjoin(result, '');
end

```