

- A) Write a function that receives two parameters: a sentence and a vector of characters. The function prints the words of the sentence that contain any of the characters specified in the vector. Note: You should assume that a word does not contain more than one character from the vector.

Example:

```
findCharsA('Martin is looking out of the window', ['a' 'w'])  
  
ans =  
  
    'Martin window'
```

- B) Write another function that now only prints the words of the sentence that contain both of the characters specified in the vector.

Example:

```
findCharsB('Martin is looking out of the window', ['i' 'n'])  
  
ans =  
  
    'Martin looking window'
```

- C) Write a third version of the function. This time the function receives three parameters: a sentence, a character, and a vector with the numbers of the words that need to be printed in case they contain the character.

Example:

```
findCharsC('Martin is looking out of the window', 'i', [1 2 5])  
  
ans =  
  
    'Martin is'
```

## SOLUTIONS

A)

```
function [outstring] = findCharsA (instring, vwords)
outstring = [];
while (isempty(instring) == 0)
    [words, instring] = strtok(instring);
    for i = vwords
        if (strfind(words, i) > 0)
            outstring = [outstring ' ' words];
        end
    end
end
end
```

B)

```
function [outstring] = findCharsB (instring, vwords)
outstring = [];
counter = 0;
while (isempty(instring) == 0)
    [words, instring] = strtok(instring);
    for i = vwords
        if (strfind(words, i) > 0)
            counter = counter + 1;
        end
    end
    if counter == length(vwords)
        outstring = [outstring ' ' words];
    end
    counter = 0;
end
end
```

C)

```
function [outstring] = findCharsC (instring, vwords, vpos)
outstring = [];
counter = 1;
while (isempty(instring) == 0)
    [word, instring] = strtok(instring);
    for i = vpos
        if (counter == i)
            if (strfind(word, vwords) > 0)
                outstring = [outstring ' ' word];
            end
        end
    end
    counter = counter + 1;
end
end
```