Problem X. Write the following function. Your function should work for all possible inputs as specified by the problem. Do NOT hard code using any of the examples.

Function Name: `puppyResearch`

Inputs (2): (char) Name of text file filled with dog breeds (will end in '.txt')

(char) A word to find, the undesired trait

Outputs (0): None

Output Files (1): Text file with remaining dog breeds

Function Description:

After years of dreaming, you are finally ready to purchase your very first puppy! Create a function called `puppyResearch` that will take a file with dog breeds (in the form `'<breed>.txt'`) on separate lines. Each dog breed has a corresponding text file that contains a single line of information. Scan each file to determine if the undesired trait is found in the description of the dog. If the unwanted trait is not found, write the dog breed to a new file called `'<original>ToAdopt.txt'`.

Notes:

- The undesired trait is not case sensitive – `'large'` is just as bad as `'LaRge'`
- It does not count if the trait appears in other words (i.e. `'largely'` should not be censored).
- It is OK if your file has an empty new line at the end.

Test Case:

```
trait = large;
```

breeds.txt

```
cockerSpaniel.txt
berneseMountainDogs.txt
australianShepherds.txt
corgis.txt
dalmations.txt
```

cockerspaniel.txt

```
This breed is known for its enlarged eyes and sweet expression
```

berneseMountainDogs.txt

```
This large breed helped farmers by pulling carts and doing the work
```

breedsToAdopt.txt

```
cockerSpaniel.txt
australianShepherds.txt
corgis.txt
dalmations.txt
```

SOLUTION

```
function puppyResearch(filename, trait)
fh1 = fopen(filename)
fhw = fopen([filename(1:end-4) 'ToAdopt.txt'], 'w')
line1 = fgetl(fh1)
while ischar(line1)
      fh2 = fopen(line1)
      line2 = fgetl(fh2)
      [word, rest] = strtok(line2)
      add = true
      while ~isempty(word)
            if strcmpi(word, trait)
                  add = false
            end
            [word, rest] = strtok(rest)
      end
      if add
            fprintf(fhw, [line1 '\n'])
      end
      fclose(fh2)
      line1 = fgetl(fh1)
end
fclose(fh)
fclose(fhw)
end
```