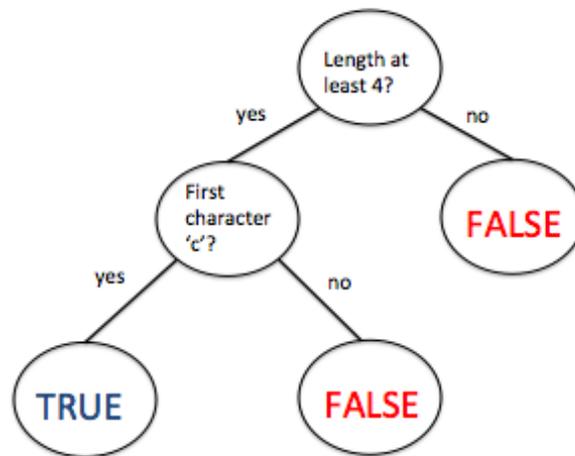


## CSCI1101: Discussion section exercise for September 10-11.

1. Download the file `discussion3.py` from the website. This `.py` file contains no main program statements (yet), just function definitions. Thus when you run it, you will not see anything happen right away. But you can now call the functions. For example, see what happens when you type this at the prompt:

```
f_1_1('cats')
```

2. The functions contained in the file are supposed implement the algorithm depicted in the *decision tree* shown below, which will tell us if a string has length at least 4 and begins with the letter 'c'. Just using the diagram, tell what the result should be if the input is 'cats'. What if it is 'cat'? if it is 'Cats'?



3. Now test each of the three functions on each of the inputs given above. Study the code carefully and make sure you understand how each one manages to achieve the same effect.

4. Write a function that returns True if its argument is a string that begins with 'c' OR has length at least 4. So for example, the function should return True on each one of the three examples given above, but False if the argument is 'Dog'. **You should write three different versions of this function.** The first will use the `if..else` construct. The second will use no ifs at all, but instead make use of the boolean operations `and`, `or`, `not`. The third will use ifs but not `else` or `elif`.

5. Now write a function that has two arguments. If the arguments are strings that have the same length and the same first character, the function returns 2. If they agree on only one of these two features (length, or first character) the function returns 1. If they agree on neither, the function returns 0.

6. Now write a main program that prompts the user to enter two strings, calls the function you wrote in 5, and then prints the resulting score. For example, a typical run of the program will look like this (user responses shown in red):

Enter the first string: **cat**  
Enter the second string: **Cat**  
Your score is 1.