

**Warm up discussion problem:**

Acting on an anonymous phone call, the police raid a house to arrest a suspected murderer. They don't know what he looks like but they know his name is John and that he is inside the house. The police bust in on a carpenter, a lorry driver, a mechanic and a fireman all playing poker. Without hesitation or communication of any kind, they immediately arrest the fireman. How do they know they've got their man?

## Workshop: *Algorithms*

1. A palindrome is a sentence that contains the same sequence of letters reading it either forwards or backwards. A classic example is: "Able was I, ere I saw Elba." Write a recursive function that detects whether a string is a palindrome. The basic idea is to check that the first and last letters of the string are the same letter; if they are, then the entire string is a palindrome if everything between those letters is a palindrome. There are a couple of special cases to check for. If either the first or last character of the string is not a letter, you can check to see if the rest of the string is a palindrome with that character removed. Also, when you compare letters, make sure that you do it in a case-insensitive way.
2. Write and test a recursive function `max` to find the largest number in a list. The `max` is the larger of the first item and the `max` of all the other items.
3. Write a recursive function to print out the digits of a number in English. For example, if the number is 153, the output should be "One Five Three."