Course 161/2S3, Tutorial, Trinity Term, 2006

- Understand the use of structures in the `Employee.c` program, versions 1 and 2 (see `http://www.maths.tcd.ie/~ryan/teaching/Programs.html` for a version to download).

- *From June 2004*
  Indicate the order of evaluation of the following `C` expressions by adding the appropriate parentheses. Eg. $x = a + b$ is written $(x = (a + b))$.

  ```
  (i)   x * y / w * z
  (ii)  x < y && x < w || w != z
  (iii) ! x / ! ! w + 1.0
  ```

  What values do these expressions return if $x = 1.0, y = 2.0, w = 1, z = 2$?

  What is the link between pointers, arrays and strings in the `C` programming language?

  What is the primary difference between arrays and structures in `C`?

  Explain the difference between the "call by value" and "call by reference" mechanisms in terms of variables passed to functions from the calling environment in `C`.

  Illustrate the use of "call by reference" by writing a `C` function which uses pointers to swap the values of two integers in the calling environment.