

**Homework Project 1**

Given 02/22/2016, Due 03/06/2016

Implement the mergesort algorithm on lists. You write one function

```
struct listnode * sort(struct listnode * a);
```

with

```
struct listnode { struct listnode * next; int key;};
```

It takes a list, and returns the list in sorted sequence. You change only pointers, do not allocate new nodes, move key values to different nodes, or copy everything into an array. The programming language is C or C++; test your code before submission using the `gcc` or `g++` compiler. Please remove all dead code; try to program as clearly as possible, since I try to read it. Your function for this should be less than fifty lines of code long. Do not copy code from another student or from the web; this is an easy project, and must be all your own work.

Submit your source code by e-mail to [phjmbrass@gmail.com](mailto:phjmbrass@gmail.com); include the course (220) and homework number in the subject line, and your name as a comment in the homework file.