Homework Project 2

Given 3/30/2016, Due 4/20/2016

Create a two-dimensional segment tree, that is, a structure which receives a list of axis-aligned rectangles, and builds a structure that allows for stabbing queries. For a given query point, you should return all those rectangles that contain the query point.

The rectangle list structure is defines as

```
struct rect_list_t { struct rect_list_t *next;
                     int x_min; int x_max;
                     int y_min; int y_max;}
```

Then you define a structure `struct seg_tree_2d_t`, and functions

```
struct seg_tree_2d_t * create_seg_tree_2d( struct rect_list_t *list)
```

and

```
struct rect_list_t * query_seg_tree_2d( struct seg_tree_2d_t *tree,
                                        int x, int y)
```

Submit your code by e-mail to `phjmbrass@gmail.com`. Include the course number I96 and the homework number hw1 in the subject line. Test your code before submission. Do not share code with other students, or use code from the web.