CCSCI330 - Exam 4 SP12

The following function sorts an array of integers in ascending order using the selection sort algorithm:

```
void selectionsort(int arr[], int size)
{
    for (int i = 0; i < size - 1; i++)
    {
        int min = i;
        for (int j = i + 1; j < size; j++)
        {
            if (arr[j] < arr[min])
            {
                min = j;
            }
        }
        int tmp = arr[i];
        arr[min];
        arr[min] = tmp;
    }
}</pre>
```

For this exam, I would like you to complete the following tasks:

- 1. Create a structure called rectangle that defines a new type consisting of the following fields:
 - a. name(string)
 - b. width (int)
 - c. height(int)
- 2. Edit the selectionsort function given above so that it sorts an array of **pointers to rectangles** in descending order by width.
- 3. Create a main method that does the following:
 - a. creates five rectangles
 - b. populates an array of **pointers to rectangles** using the addresses of the five rectangles you created
 - c. sorts the array of rectangle pointers in descending order by width using your new selectionsort function
 - d. prints the rectangles in the array to the console to show that your new sorting method worked

When you are done, please post your source file to the canvas dropbox.