

Homework #1: The Big 10

Logistics (always true)

1. **Put your name IN the listings**, not handwritten on the top.
2. An occasional comment would be nice, especially where the code isn't clear.
3. Don't return my program files. Just return the ones that you coded.
4. Staple multiple pages, and make sure they are in the correct order.
5. **Always** attach output of successful test run or if it wasn't successful, note that in the submittal.
6. Templates are always good but not required.

ESA Homework #1 specifics

7. Check legality of index (>0 , $\leq \text{max}$) on all operations where it is an input argument
8. Deletion issues in a collection class
 - A. ESA Destructor should delete the allocated ESA array
 - B. ESA should **NOT** delete a Student object on Remove operation which it did not create.
 - C. ESA should not delete a Student object on Store operation for the same reason
9. Reallocation when array size exceeded
 - A. Do **NOT** reallocate on every Insert / Remove
 - B. Do **NOT** reallocate "downwards" if the space is not being used
 - C. Realloc must free old array after transferring out elements
10. Reuse
 - A. Put Realloc into a separate (private) method invoked by Append, Insert and Prepend and/or
 - B. Have both Prepend and Append simply call Insert (at index 0 and cnum respectively)