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HW 02 Written

1. What is printed if you ran the following code. Would this be what you wanted to happen? Is there anything that goes wrong?

For the first cout ≪ myA1.get(0) you would get 12, which works fine because that is just what you put int.

For the second cout ≪ myA1.get(0) you would get 10 because there is no copy constructor so when you added the element to A2 it was also being added to A1 because those are the same thing.

For the third cout ≪ myA1.get(0) you would get 5 because while there is no assignment operator overloaded, so they are pointing to the same space in memory.

1. 2. For each of the following code fragments, determine the worst case running time using BigOh notation as a function of n.
   1. O(log(n))
   2. O(nlog(n))
   3. O(n)
   4. O(n2)
   5. O(n2)
   6. O(n)
2. What is the difference between delete [] and delete?

Delete deletes a pointer to something that is on the heap, while delete [] deletes some pointer to an array and the entire array with it.

1. For programming problem 1, Using big-Oh notation if size = n, give the worst case running time for the:
   1. O(n)
   2. O(1)
2. Using big-Oh notation what is the running time of the following code snippets where v is a vector of n > 0 integers.
   1. O(n)
   2. O(1)
3. If your code contained the following functions State which function was called for each of the following.
   1. Function 3
   2. Function 2
   3. Function 3
   4. Function 1
4. Determine if the specified expression is an rvalue or an lvalue:
   1. lvalue
   2. lvalue
   3. rvalue
   4. rvalue
5. Anything wrong with this code? If there is, please describe what the problem is, otherwise state there is no problem.

Because you are declaring name inside the function, it will get deleted by the end of the function. Since we want to return name as a string& we are getting a location of something that we don’t really know what it is because it was deleted and now anything can be there.