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PROBLEM 1:

Things Learned:

1. Subscript operator overloading. <[Link](#)> <[Link](#)> <[Link](#)>
2. const members (functions or data members) can only call out the const members and not normal members.
3. Overloading Stream out (<<) operator. <[Link](#)> <[Link](#)> <[Link](#)>

Problems Faced:

1. Implementation of subscript operator overloading.
2. Implementation of overloading Stream out (<<) operator. <[Link](#)>

PROBLEM 2:

Things Learned:

1. Learned about basics of libraries vector & cstdlib (for ran function).
2. Reminisced insertion sort. <[Link](#)>
3. Can't work with greater than operator in insertionSort function, if we have overloaded less than operator. <check insertion_sort.cpp to know more>

Problems Faced:

1. Implementing the whole code.
2. Issues with less than operator overloading and stream out operator overloading.
3. Using vectors and rand functions.
4. Faced some issues with insertion sort at first, but afterwards implemented successfully.
5. Faced with issues with large values, that is why tested with smaller values.

PROBLEM 3:

Things Learned:

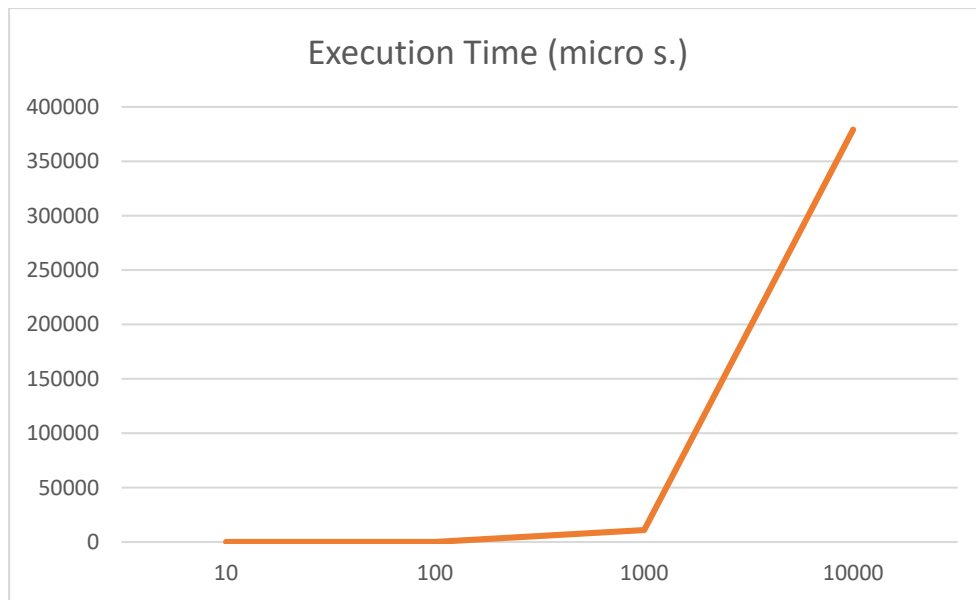
1. Working with chrono library for measuring time in C++. <[Link](#)>
2. Understood the difference in performance b/w object-oriented code & the non-object oriented code (for int types).

Problems Faced:

1. Implementing the whole code.
2. Faced issues with calculating time and chrono library functions.
3. Faced issues with large values.

Solutions of Questions in the PDF:

1. .



2.

- <Line graph for Execution Time for Point objects.>



3.

- <Line graph for Execution Time for Point objects as well as Int types.>

- Gives an idea of the performance b/w object-oriented code & the non-object oriented code (for int types).