Data Structures
CS 246 - 040
Department of Physics and Computer Science
Medgar Evers College
Exam 2 Redo

Instructions:

- **The exam redo requires writing a cpp file within an hour. It requires completing a single task.**
- **Accompanying this file is a template cpp file and header files. You must modify the cpp file; however, you cannot add additional libraries to or remove any libraries from the file. Furthermore, you cannot create any additional classes and/or structs. All other modifications are allowed.**
- **Your submissions must be submitted to the Exams directory of your github repository and/or as attachments on Google classroom under the Exam02 assessment. The files must have the accurate extensions.**
- **Cheating of any kind is prohibited and will not be tolerated.**
- **Violating and/or failing to follow any of the rules will result in an automatic zero (0) for the exam.**

TO ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTOOD THE INSTRUCTIONS ABOVE, AT THE BEGINNING OF YOUR SUBMISSION(S), ADD A COMMENT THAT CONSISTS OF YOUR NAME AND THE DATE

Grading:

Section	Maximum Points	Points Earned
Implementation	5	
Total	5	

Implementation

1. **A set data structure is a collection of distinct items. An *OrderedSet* container class of a set data structure contains the fields**

```
template<class T>
class OrderedSet
{
  private:
  Array<T> data;
  int size;
};
```

where *size* represents a number of distinct items in the set data structure.
Given that the items of the set is stored in descending order in *data*, write the definition of the insertion method of *OrderedSet* whose header is

```
void Insert(const T& item)
```

If *item* does not already exists in the set and *size* is less than the size of *data*, it adds *item* to *data* in the correct position and it increments *size* by 1; otherwise, it does nothing.