Generic Types

Objective

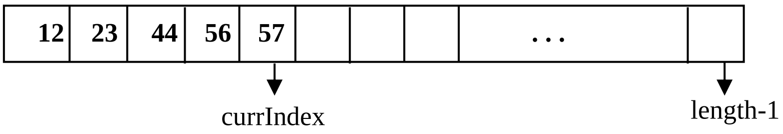
- The objective of this lab is to understand the implementation of dynamic array.

Task

1. Build a program to implement generic Dynamic Array where size of the array is resizable.

```
Class MyArrayList<T extends Comparable<T>>
     {
         T[] arr;
         int currIndex;

     MyArrayList()   // default constructor to create an array
         {
            arr = (T[])new Comparable[10];
            currIndex=-1;
         }

      MyArrayList(int size)   // constructor to create an array
         {
            arr = (T[])new Comparable[size];
            currIndex=-1;
         }

public String toString(){
   String str=””;
   for(int i=0; i<arr.length;i++)
      str=str+arr[i]+”\n”;
return str;
}

  public void add (T data)   {
```

// Assume the insertion is going to perform in ascending order. If array is full then increase the arr size by double and insert new value



```
         }
```

```
      public int find(T value) { … } // if the value is found in array then return it’s index;

       public void clear() {…} // clear array from memory, just assign null to arr.

       public T get(int index){…} // get a value from given index

       public void update(int index, T value) {
               // update value on given index and maintain a array list in ascending order
        }
       public void remove(T value) { …  }
       // first find the value in an array then delete the value.
      // delete through backward movement in an array to overwrite the cells.
       // update currIndex
   }
```