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| *A close up of a logo  Description automatically generated* | *DEPARTMENT OF COMPUTER ENGINEERING* |

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| Semester | S.E. Semester III – Computer Engineering |
| Subject | Object Oriented Programming Using Java (Skill Based Lab) |
| Subject Professor In-charge | Prof. Indu Anoop |
| Laboratory | Online Lab |

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| Roll Number | 20102A0004 | |
| Grade and Subject Teacher’s Signature |  |  |

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| Experiment | 7B | |
| Problem Statement | WAP to demonstrate 2DArray, ArrayList and Vectors. | |
| Resources / Apparatus Required | Hardware: Computer System | Software: jdk 1.8, Eclipse / Notepad++/IntelliJ IDEA |
| Details | ArrayList is a part of collection framework and is present in java.util package. It provides us with dynamic arrays in Java. Though, it may be slower than standard arrays but can be helpful in programs where lots of manipulation in the array is needed. This class is found in java.util package.  Java ArrayList class uses a dynamic array for storing the elements. It is like an array, but there is no size limit. We can add or remove elements anytime. So, it is much more flexible than the traditional array. It is found in the java.util package. It is like the Vector in C++.  The ArrayList in Java can have the duplicate elements also. It implements the List interface so we can use all the methods of List interface here. The ArrayList maintains the insertion order internally. | |
| Code | import java.util.Collections;  import java.util.ArrayList;  public class ArrayListDemo {  public static void main(String[] args) {      ArrayList<String> obj=new ArrayList<String>();  //Add elements  obj.add("Trisha");  obj.add("Shah");  obj.add(0, "Ryan");  obj.add(1, "Paul");    obj.remove("Shah");      obj.remove(1); //remove the second element from the arraylist      Collections.sort(obj);    for(String str:obj)  System.out.println(str);  }  } | |
| Output |  | |
| Conclusion | Thus, we successfully learnt how to implement an arraylist in our program. | |