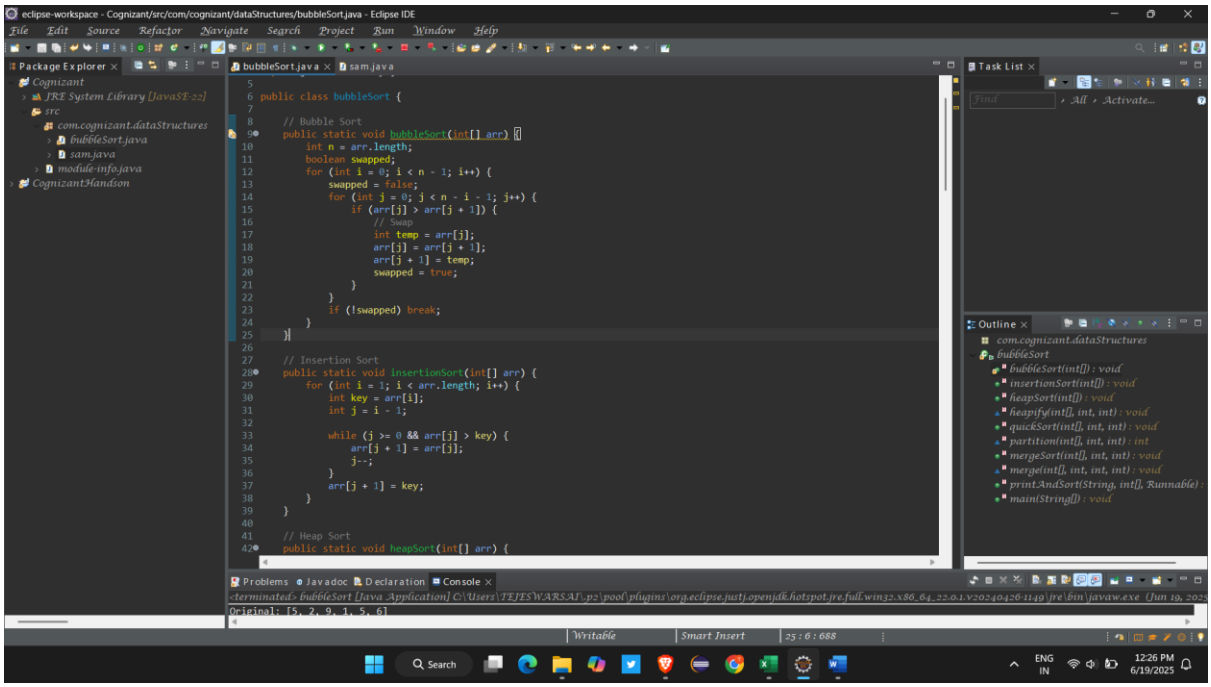
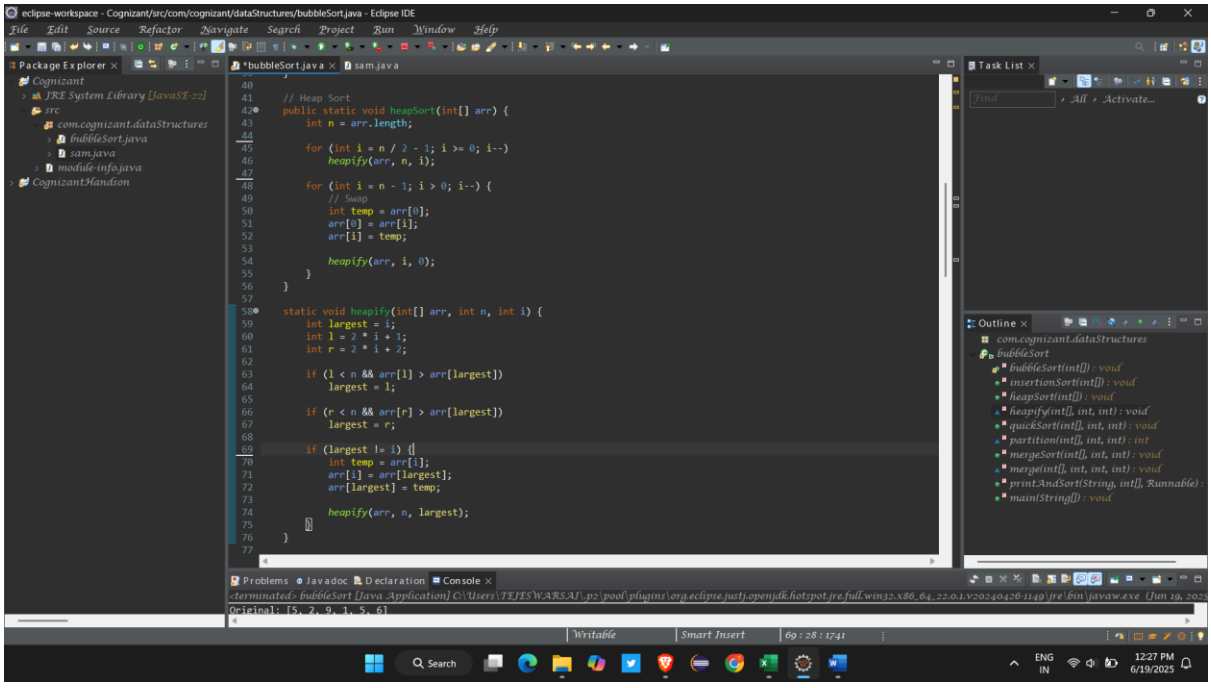
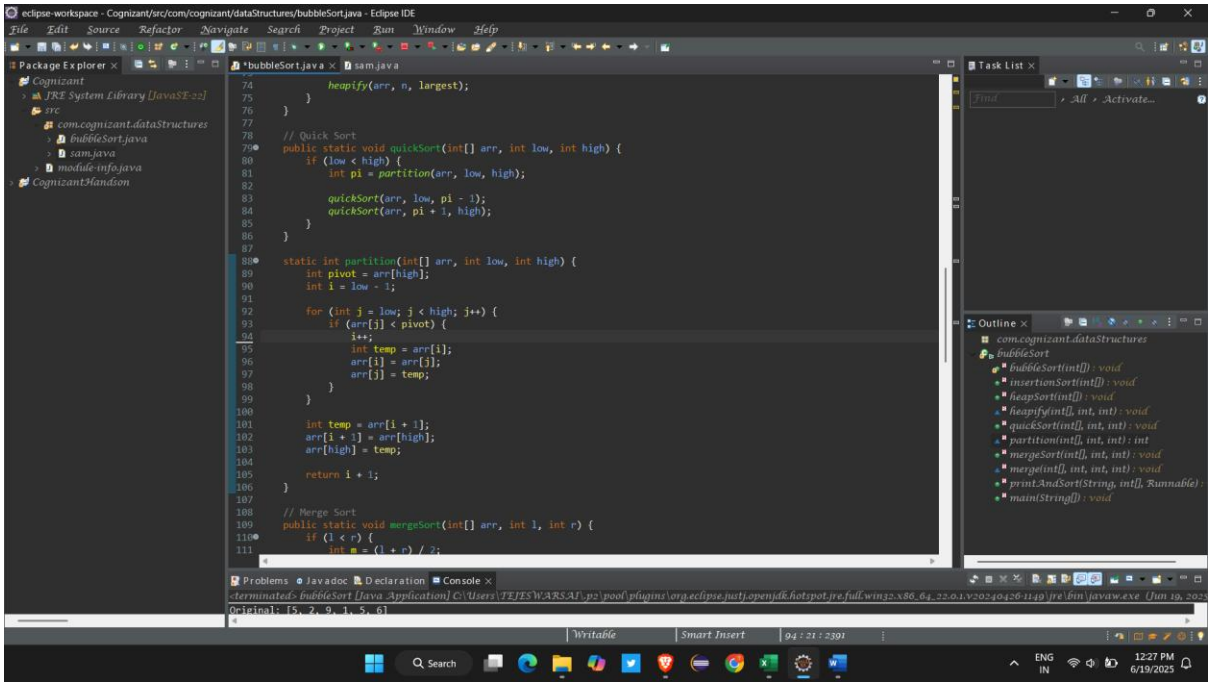
Data-Structures:






eclipse-workspace - Cognizant/src/com/cognizant/dataStructures/bubbleSort.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Cognizant
JRE System Library [JavaSE-22]
src
com.cognizant.dataStructures
bubbleSort.java
sam.java
module-info.java
Cognizant3Handson
*bubbleSort.java
sam.java
74 heapify(arr, n, largest);
75 }
76 }
77
78 // Quick Sort
79 public static void quickSort(int[] arr, int low, int high) {
80 if (low < high) {
81 int pi = partition(arr, low, high);
82
83 quickSort(arr, low, pi - 1);
84 quickSort(arr, pi + 1, high);
85 }
86 }
87
88 static int partition(int[] arr, int low, int high) {
89 int pivot = arr[high];
90 int i = low - 1;
91
92 for (int j = low; j < high; j++) {
93 if (arr[j] < pivot) {
94 i++;
95 int temp = arr[i];
96 arr[i] = arr[j];
97 arr[j] = temp;
98 }
99 }
100
101 int temp = arr[i + 1];
102 arr[i + 1] = arr[high];
103 arr[high] = temp;
104
105 return i + 1;
106 }
107
108 // Merge Sort
109 public static void mergeSort(int[] arr, int l, int r) {
110 if (l < r) {
111 int m = (l + r) / 2;
Task List
Find All Activate...
Outline
com.cognizant.dataStructures
bubbleSort
bubbleSort(int[]) : void
insertionSort(int[]) : void
heapSort(int[]) : void
heapify(int[], int, int) : void
quickSort(int[], int, int) : void
partition(int[], int, int) : int
mergeSort(int[], int, int) : void
merge(int[], int, int, int) : void
printAndSort(String, int[], Runnable) :
main(String[]) : void
Problems Javadoc Declaration Console
<terminated> bubbleSort [Java Application] C:\Users\TEJESWARSAI\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.1.v20240426-1149\jre\bin\javaw.exe (Jun 19, 2025
Original: [5, 2, 9, 1, 5, 6]
Writable Smart Insert 94 : 21 : 2391
Search
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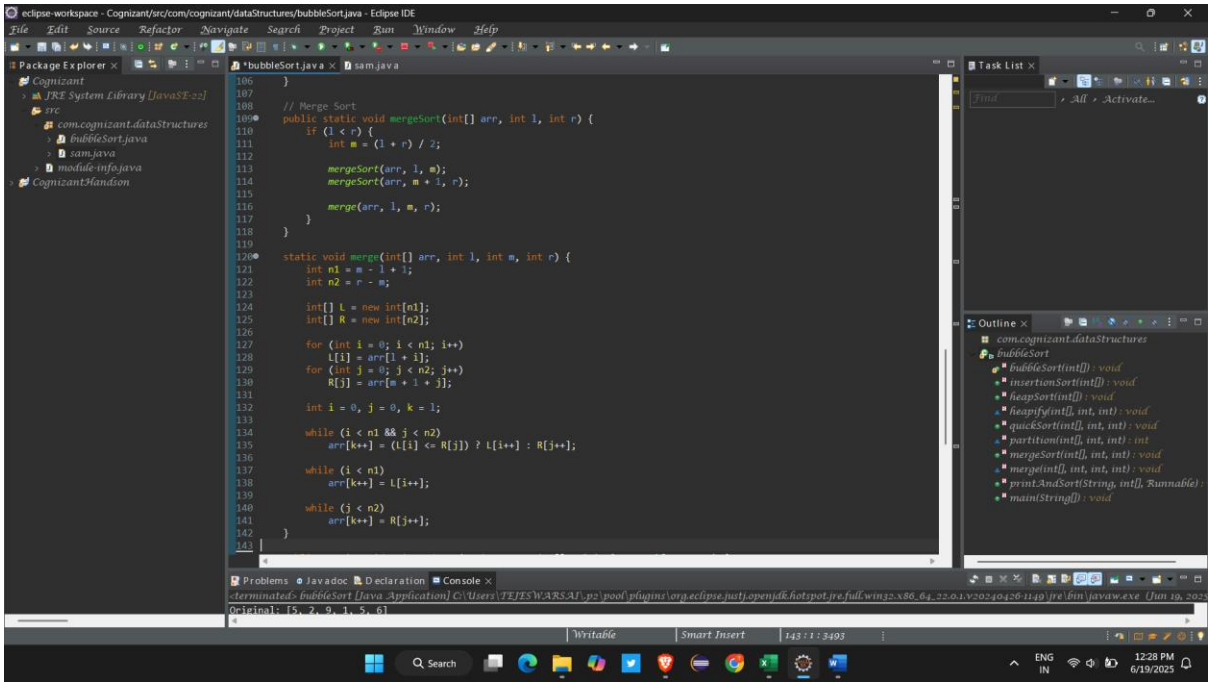
12:27 PM 6/19/2025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*bubbleSort.java
sam.java
106 }
107
108 // Merge Sort
109 public static void mergeSort(int[] arr, int l, int r) {
110 if (l < r) {
111 int m = (l + r) / 2;
112
113 mergeSort(arr, l, m);
114 mergeSort(arr, m + 1, r);
115
116 merge(arr, l, m, r);
117 }
118 }
119
120 static void merge(int[] arr, int l, int m, int r) {
121 int n1 = m - l + 1;
122 int n2 = r - m;
123
124 int[] L = new int[n1];
125 int[] R = new int[n2];
126
127 for (int i = 0; i < n1; i++)
128 L[i] = arr[l + i];
129 for (int j = 0; j < n2; j++)
130 R[j] = arr[m + 1 + j];
131
132 int i = 0, j = 0, k = l;
133
134 while (i < n1 && j < n2)
135 arr[k++] = (L[i] <= R[j]) ? L[i++] : R[j++];
136
137 while (i < n1)
138 arr[k++] = L[i++];
139
140 while (j < n2)
141 arr[k++] = R[j++];
142 }
143
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Find All Activate...
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main(String[]) : void
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<terminated> bubbleSort [Java Application] C:\Users\TEJESWARSAI\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.1.v20240426-1149\jre\bin\javaw.exe (Jun 19, 2025
Original: [5, 2, 9, 1, 5, 6]
Writable Smart Insert 143 : 1 : 3493
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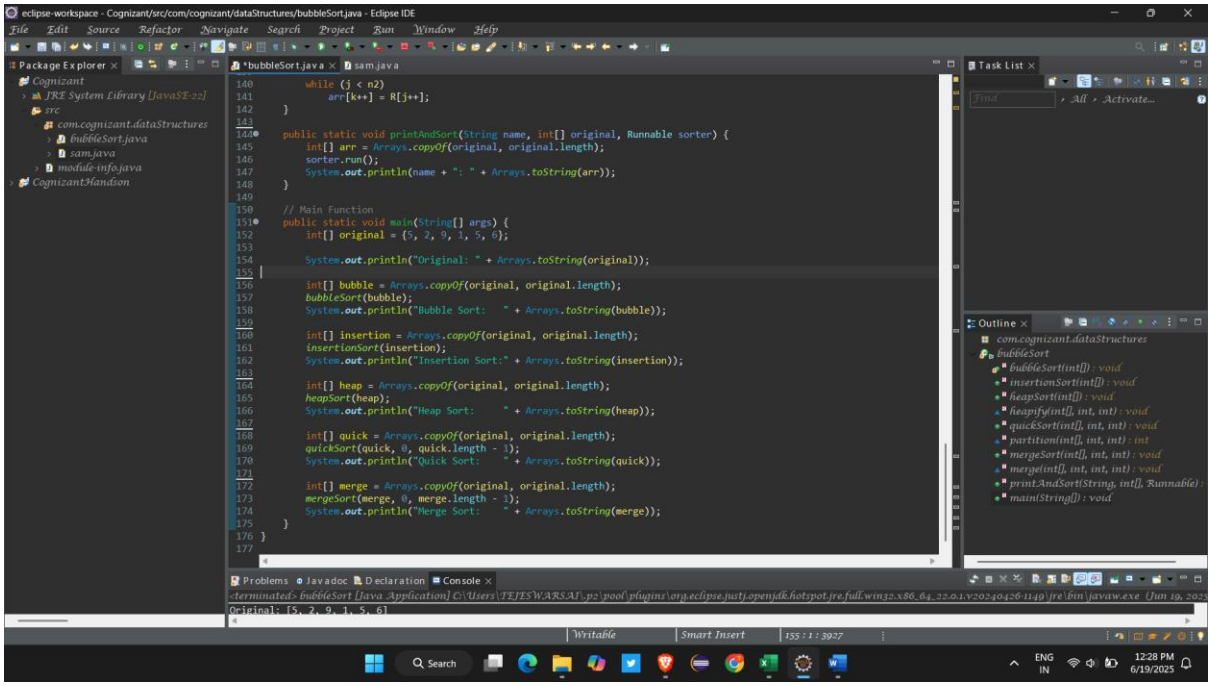
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*bubbleSort.java
sam.java
while (j < n2)
arr[k++] = R[j++];
}
public static void printAndSort(String name, int[] original, Runnable sorter) {
int[] arr = Arrays.copyOf(original, original.length);
sorter.run();
System.out.println(name + ": " + Arrays.toString(arr));
}
// Main Function
public static void main(String[] args) {
int[] original = {5, 2, 9, 1, 5, 6};
System.out.println("Original: " + Arrays.toString(original));
int[] bubble = Arrays.copyOf(original, original.length);
bubbleSort(bubble);
System.out.println("Bubble Sort: " + Arrays.toString(bubble));
int[] insertion = Arrays.copyOf(original, original.length);
insertionSort(insertion);
System.out.println("Insertion Sort:" + Arrays.toString(insertion));
int[] heap = Arrays.copyOf(original, original.length);
heapSort(heap);
System.out.println("Heap Sort: " + Arrays.toString(heap));
int[] quick = Arrays.copyOf(original, original.length);
quickSort(quick, 0, quick.length - 1);
System.out.println("Quick Sort: " + Arrays.toString(quick));
int[] merge = Arrays.copyOf(original, original.length);
mergeSort(merge, 0, merge.length - 1);
System.out.println("Merge Sort: " + Arrays.toString(merge));
}
}
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Original: [5, 2, 9, 1, 5, 6]
Writable
Smart Insert
155 : 1 : 3927
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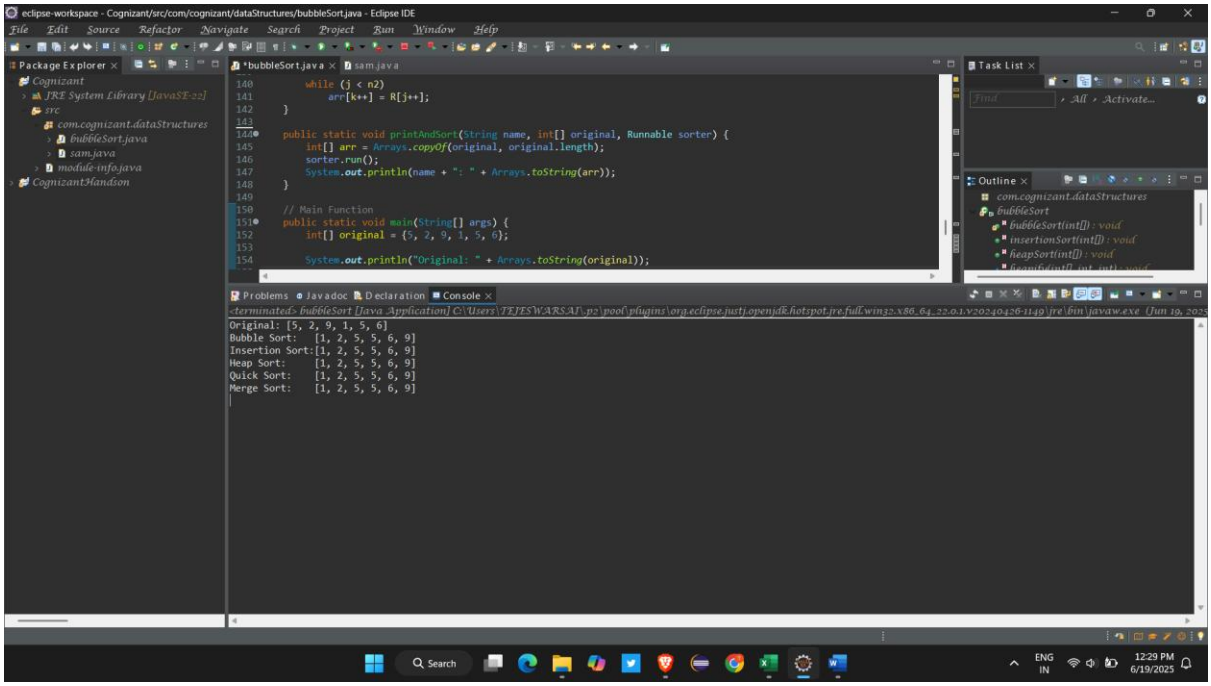
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arr[k++] = R[j++];
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sorter.run();
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}
// Main Function
public static void main(String[] args) {
int[] original = {5, 2, 9, 1, 5, 6};
System.out.println("Original: " + Arrays.toString(original));
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Original: [5, 2, 9, 1, 5, 6]
Bubble Sort: [1, 2, 5, 5, 6, 9]
Insertion Sort:[1, 2, 5, 5, 6, 9]
Heap Sort: [1, 2, 5, 5, 6, 9]
Quick Sort: [1, 2, 5, 5, 6, 9]
Merge Sort: [1, 2, 5, 5, 6, 9]
Search
ENG
IN
12:29 PM
6/19/2025