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***BSCS-6B***

***LAB #3***

***188990***

***ADVANCED PROGRAMMING***

***TASK #1: (IMPLEMENTING NON RECURSIVE FILE)***

package javaapplication1;

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\*

\* @author mkazmi.bscs16seecs

\*/

public class NonRecursive extends SortFactory{

public SortingAlgorithm getAlgorithm(){

if(algorithm.equals("Selection")){

return new SelectionSort();

}

else

return new InsertionSort();

}

}

***TASK #2: (INSERTION SORT CLASS)***

package javaapplication1;

/\*\*

\*

\* @author mkazmi.bscs16seecs

\*/

public class NonRecursive extends SortFactory{

public SortingAlgorithm getAlgorithm(){

if(algorithm.equals("Selection")){

System.out.println("The algorithm is implemented by Selection Sort: ");

return new SelectionSort();

}

else{

System.out.println("The algorithm is implemented by Insertion Sort: ");

return new InsertionSort();

}

}

}

***TASK #3: (TEST CODE USING BOTH SELECTION AND INSERTION SORT)***

package javaapplication1;

/\*\*

\*

\* @author mkazmi.bscs16seecs

\*/

public class JavaApplication1 {

public static void main(String[] args) {

// The elements to be sorted

String[] elements = {"beta", "chi", "alpha", "zeta", "nu", "mu"};

// The factory -- creates non-recursive sorting algorithms

SortFactory factory = new NonRecursive();

// set the factory to selection sorts

factory.setFactory("Selection");

// Get the sorting algorithm from the factory

SortingAlgorithm algorithm = factory.getAlgorithm();

// apply the algorithm

algorithm.sort(elements);

for (int i = 0; i < elements.length; i++)

System.out.println(elements[i]);

}

}



