EC4070: Data Structures and Algorithms

LAB 08

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SEMESTER 4

EC4070

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Q1.

import java.util.\*;

public class FillBottle

{

public static int maxbottles(int []array,int capacity)

{

int total=0,num=0;

int[] arr = arr\_sort(array);

if (capacity <= 0)

{

return 0;

}

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

{

if (total<=capacity)

{

total+=arr[i];

++num;

}

}

if(total>capacity)

{

num-=1;

}

return num;

}

public static int [] arr\_sort(int array[])

{

int temp;

for(int i=0;i<array.length-1;++i)

{

for(int j=0;j<array.length-i-1;++j)

{

if(array[j]>=array[j+1])

{

temp=array[j];

array[j]=array[j+1];

array[j+1]=temp;

}

}

}

return array;

}

public static void main(String arg[])

{

Scanner sc = new Scanner(System.in);

System.out.print("Enter the of capacity of the container : ");

int capacity=sc.nextInt();

System.out.print("Enter the number of bottle : ");

int num = sc.nextInt();

int [] arr2 =new int[num];

System.out.print("Enter the bottel capacity: ");

for(int i=0;i<num;++i)

{

arr2[i]= sc.nextInt();

}

System.out.println(maxbottles(arr2,capacity)+" maximum number of bottles can fill.");

}

}





