

Programming Assignment #6

Arrays I

In all the following questions, the input array is read from the user by first entering the array size, then the array elements.

1) Write a Java program that copies an array of int to another array after multiplying each element by 2. And finally print the copied array. For example,

Input:

Enter array size: 3

Enter array elements:

5

8

10

Output:

10

16

20

Note: You should store the copied array in a new separate array and print it once at the end of the program.

2) Write a Java program that given an array of integers and a key will print “found” iff (if and only if) the key occurs in the array otherwise it will print “not found”.
For example, for the Array = {10, 5, 11, 10} and key 11 the method will print “found” and for Array = {1, 2, 3, 4} and key 11 the method will print “not found”.

Input:

Enter array size: 4

Enter array elements:

10

5

11

10

Enter Key: 11

Output:

found

3) A company pays its sales people on a commission basis. The salespeople receive \$200 per week plus 9% of their gross sales for that week. For example, a salesperson who grosses \$3000 in sales in a week receives \$200 plus 9% of \$3000, which is total of \$470. Write a Java program that uses an ARRAY determine how many salespersons earned salaries in each of the following ranges. Assume each person’s salary is truncated to an integer.

- a) \$200 – \$299
- b) \$300 - \$399
- c) \$400 – \$499
- d) \$500 - \$599
- e) \$600 - \$699
- f) \$700 - \$799
- g) \$800 – 899
- h) \$900 - \$1000
- i) \$1000 and above

Note that using an array to store the counts is a requirement!

For example:

Input:

Enter number of Employees: 6

Enter Employee gross sale: 3000
Employee salary is \$470

Enter Employee gross sale: 1000
Employee salary is \$290

Enter Employee gross sale: 10000
Employee salary is \$1100

Enter Employee gross sale: 8000
Employee salary is \$920

Enter Employee gross sale: 200
Employee salary is \$218

Enter Employee gross sale: 7000
Employee salary is \$830

Output:

Total 6 Employees Reported
Employees in the range:

200 – 299: 2
300 – 399: 0
400 – 499: 1
500 – 599: 0
600 – 699: 0
700 – 799: 0
800 – 899: 1
900 – 999: 1
Over 1000: 1

4) Write Java program that given two arrays of integers, prints the union array and the intersection array. Assume that the input arrays do not consist of duplicates.

For example

Array1: 12, 32, 14, 35, 89, 16, 120

Array2: 9, 12, 8, 17, 120, 35, 36

Union (Array1, Array2): 12, 32, 14, 35, 89, 16, 120, 9, 8, 17, 36

Intersection (Array1, Array2): 12, 35, 120

Input:

Enter first array size: 7

Enter first array elements:

12

32

14

35

89

16

120

Enter second array size: 7

Enter second array elements:

9

12

8

17

120

35

36

Output:

Union:

12

32

14

35

89

16

120

9

8

17

36

Intersection:

12

35

120

Note: You should use loops here.
