Problem Set 3 Exercise #09: Find Pair

Reference: Lecture 7 notes

Learning objective: One-dimensional array

Estimated completion time: 30 minutes

Problem statement:

Given an <u>unsorted</u> array of <u>distinct</u> integers and another integer **key**, check if there exist two different array elements **x** and **y** such that **x + y = key**.

For example, given an array { 1, 5, 3, 4, 2 } and **key** 7, 5 + 2 = 7 and 3 + 4 = 7.

Your program should contain a static method

```
boolean checkPair(int[] arr, int key)
```

that takes an unsorted array **arr** and a **key**, returns true if there exists at least 1 pair of integers whose sum equals **key**, or false otherwise.

Write a program **PS3_Ex09_Pair.java** for the above task.

Note:

You should avoid duplicated comparison as much as possible.

Sample run #1:

```
Enter the number of distinct elements: 5
Enter 5 elements: 1 -2 3 8 6
Enter key: 4
Exist
```

Sample run #2:

```
Enter the number of distinct elements: 4
Enter 4 elements: 1 5 9 0
Enter key: 7
Not exist
```