Problem Set 4 Exercise #23: Contains

Reference: Lecture 12 notes

Learning objective: Recursion

Estimated completion time: 25 minutes

Problem statement:

Write a program **PS4_Ex23_Contains.java** to read in a positive integer **number** and a single-digit non-negative integer **k**, invoke a static <u>recursive</u> method

```
boolean contains(int number, int k)
```

that checks if **k** appears in any position of **number**. It returns true if so, or false otherwise.

You should **NOT** use any loop structures (*for*, *while* or *do-while* loop) in your program.

Sample run #1:

```
Enter a positive integer: 123
Enter a single digit integer k: 1
1 appears in 123
```

Sample run #2:

```
Enter a positive integer: 102
Enter a single digit integer k: 0
0 appears in 102
```

Sample run #3:

```
Enter a positive integer: 123
Enter a single digit integer k: 4
4 doesn't appear in 123
```