LAB9 Pattern Matching

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11 Dec 2019

Introduction

This lab is designed to give you a simple practice with pattern matching. This is an individual assignment; you may not share code with other students.

Specification

In this lab, your task is to implement the two algorithms to match the string.

Note that, you should implement your own algorithm and may not call any library function in this lab.

```java
public class PatternMatching {

    //......
    public int Boyer-Moore()
    {
        //use Boyer-Moore algorithm
        //print the Character-jump array
        //return the index of first match
    }
    public int KMP()
    {
        //use KMP algorithm
        //print the NEXT array
        //return the index of first match
    }
}
```

Test Case

There are files pattern.txt and text.txt, read the file and match the pattern string to the text string, use the pattern matching algorithms to do pattern matching and print the right index of first matching.

```
public class PatternMain {

    public static void main(String[] args) {
        PatternMatching pm = new PatternMatching();
        //read the files pattern.txt and text.txt and match pattern to the text
with the two methods
        //......
        //print the right first index of matching
    }

}
```

The output index is as follow: (Character-jump array may be not the same.)

```
First index:720969

NEXT: -1 0 1 0 0 0 0 0 0 1 2 3 4 0 1 0
```

Deadline

2019/12/14 18:00

Please compress your code and upload into the FTP server with filename in format YourStudentID.zip.