Deliverables

Make a class SuffixTree.java that implements the above mentioned functionality. It should have a main method which takes two system arguments. The first argument will be input test case file name and the second argument will be the output file name in which you will write the answer. Make sure the executable formed runs with the following commands.

```
$       javac *.java
$       java SuffixTree <testcase_name> <your_outputfile_name>
```

Input Format

You have to read the input file whose name will be provided in the system argument. The file will have the following format. The first line will have the long text string T. The second line will have an integer, namely N which specifies the number of pattern queries in this file. The next N lines will have pattern string P, one in each line.

See the example below-

```
This is your assignment.
3
yo?r
y?r
is
```

Output Format

You have to output the indices of the text string T (starting from 0) where the pattern P matches it. You have to provide both the starting index and the final index (both inclusive), till which the pattern matches. In case, there are multiple matches, you have to print all the pairs of indices in separate line in sorted order (for tuple, sort first by start index and then by end index). Do not print anything for that query pattern which do not match any part of the text T. Print answer for all queries in separate lines.

See the output for the input above-

```
8 11
2 3
5 6
```