CS209A Tutorial 13

Initial Practice Exercise

Run the program RegexTest.java, try to input a pattern and a string used to be matched and observe the result. You should use the program to test the expressions that were discussed in the lectures.

The program RegexTest takes a regular expression and an input string on the command line. For example, you can run the following command with the Regex *a** and the string *aba*:

```
java RegexTest a* aba
```

Result:

```
a*
aba

Match found : true
Match start : 0
Match end : 1
Match content : a

Match found : true
Match start : 1
Match end : 1
Match content :

Match found : true
Match start : 2
Match end : 3
Match content : a

Match found : true
Match start : 3
Match end : 3
Match content :
```

Another example:

```
java RegexTest  ^(1171)[0-9]{4} 11710001161000211810003
```

And the result:

```
^(1171)[0-9]{4}
11710001161000211810003

Match found : true
Match start : 0
Match end : 8
Match content : 11710001
Group 1 : 1171
```

Questions

1. Given some dates, split them using year date and day with Chinese Characters: "年""月""日".

Input:

```
2019 年 4 月 8 日星期一
2019 年 4 月 9 日星期二
2019 年 4 月 10 日星期三
```

Output:

```
2019
4
8
2019
4
9
2019
4
10
```

2. Given some email addresses of SUSTech students, use regular expressions to get the student id and print it:

Input:

```
11710001@mail.sustc.edu.cn
11810002@mail.sustech.edu.cn
11610003@mail.sustc.edu.cn
```

Output:

```
11710001
11810002
11610003
```

3. Suppose you are developing a website, you want to check (validate) if a user has input a strong password. A strong password must contain capital letters, lowercase letters, special characters and digitals meanwhile which length should be larger than 8 and smaller than 16. (special characters: ~!@#$%^&*()_+|<>,.?/:;'[]{}\)

Input:

```
1A11111a
123aBC.,
```

Output:

```
False
True
```

4. Suppose you are working for an express company, you accept a new requirement. You need to automatically extract province, city, district, street, zip code, telephone number and other information from user input address information

Input:

广东省深圳市南山区学苑大道南山智园 A7 栋，518055，13422221111，赵老师收

Output:

Province: 广东
City: 深圳
District: 南山
Street: 学苑大道
Zip code: 518055
Telephone number: 13422221111