PROG38263 - Assignment 1
Data Validation and RegEx - 5%

Description

For this assignment you will practice data validation and regular expressions by processing lines of input from a data file. The file will be a comma separated value (CSV) file where each line will contain a rule to use for validation and a piece of data to validate. The 10 rules in the file are described below. The file will contain an unspecified number of lines. For each line in the data file you will output a line to the console indicating if the data on that line matched the rule on the same line. Your output will be a simple “yes” or “no” string.
You may use any programming language to solve this assignment. Your instructor will be testing your results in class using a supplied data file, so your program should make it easy to indicate an input file.

Special note: the data column may contain any amount of leading or trailing whitespace which should be ignored.

Validation Rules

student: 9 digits. acceptable formats: 000000000, 000 000 000
password: a-z, A-Z, 0-9, ascii printable special characters, minimum 12 characters
username: a-z, A-Z, 0-9, minimum 3 characters, maximum 20 characters
email: username@domain.TLD, username, domain and TLD will conform to the rules above for a “username” field. There will only be one TLD (i.e. no multiples like domain.co.uk)
previous: Confirm that this data field is identical to the previous line’s data field (excluding whitespace)
phone: A North American phone number. Possible formats: 1234567890, 123.456.7890, 123-456-7890, (123) 456-7890
postal: A Canadian postal code. Possible formats: A0A0A0, A0A 0A0
address: A string field containing a-z, A-Z, 0-9, periods and dashes.
binary: A single binary string, must contain only 1ss and 0s with no breaks between digits
bio: A generic string field. Report “no” only if the field contains any html tags.

Sample Input File

```
student,999999999
password,abcd1234
username,user123
email,testuser@testdomain.com
previous,testuse@testdomain.com
phone,123-456-7890
postal,M86 72Z
address,123 street blvd.
binary,11110000
bio,    hello world
```

```
student,9999 9999
student,      111111111
password,123456abcdef!!
username,stevedave
previous,stevedave
phone,((416-111-1234
postal,H1R3T7
bio,Hello<script>World</script>
```

Sample Output

```
yes
no
yes
yes
no
yes
no
yes
yes
yes
no
yes
yes
yes
yes
no
yes
no
```

Evaluation

Correct implementation of each rule: 0.25 marks each (2.5 total)
In-class demonstration: 2.5 marks for successful output from a supplied input file.

Deliverable

Upload your source code to the SLATE dropbox. Make sure your name is included in a program comment.

Due Date

See the dropbox on SLATE for due date details.