CSE 7359 – Software Security

Project – Input Validator

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Objective: Produce a program that validates its input using regular expressions.

Detail: Produce a command-line driven telephone listing program. The program should be capable of receiving and storing a list of people with their full name and telephone. The program should include the following commands:

* + ADD <Person> <Telephone #> - Add a new person to the database
  + DEL <Person> - Remove someone from the database by name
  + DEL <Telephone #> - Remove someone by telephone #
  + LIST - Produce a list of the members of the database

Create regular expressions for <Person> and <Telephone #>. Use these regular expressions to verify that the user is supplying valid data. More flexible specifications will be graded higher (e.g. allowing international or US format telephone numbers, allowing <first middle last>, <first last> or <last, first, MI>)   
  
Reject any attempts to provide invalid data.   
  
Permissible languages: C/C++, Any .Net Language, Java, Perl, Python, others with permission

Submission instructions: You are required to provide the source code including instructions on how to compile and run the software. Please let me know if your code has any dependencies (e.g. libraries, external programs, etc.) that must be installed prior to running your code. I would strongly prefer that you do not rely upon anything that is not freely available. If this is not possible, please let me know in advance so we can work out some way for me to evaluate and grade your assignment. In addition to the code and instructions, you must also turn in a report that describes your submission. This report should include a description of how your code works, any assumptions you have made, and the pros/cons of your approach. **\*Most importantly – it must include a clear description of your specific ruleset – what name formats and country/phone formats your program supports.**

Sample Inputs:

**Acceptable inputs for name:**

Bruce Schneier

Schneier, Bruce

Schneier, Bruce Wayne

O’Malley, John F.

John O’Malley-Smith

Cher

**Unacceptable inputs for name:**

Ron O’’Henry

Ron O’Henry-Smith-Barnes

L33t Hacker

<Script>alert(“XSS”)</Script>

Brad Everett Samuel Smith

select \* from users;

**Acceptable inputs for phone: \*remember these are also international numbers**

12345

(703)111-2121

123-1234

+1(703)111-2121

+32 (21) 212-2324

1(703)123-1234

011 701 111 1234

12345.12345

011 1 703 111 1234

**Unacceptable inputs for phone:**

123

1/703/123/1234

Nr 102-123-1234

<script>alert(“XSS”)</script>

7031111234

+1234 (201) 123-1234

(001) 123-1234

+01 (703) 123-1234

(703) 123-1234 ext 204