

Is this CSCD 437

Lab 6

Advanced Regular Expressions

SPECIFICATIONS

You are provided a single Python3 file named `cscd_437_regex_methods.py`. You will write your regular expression in this file. All you have to do is write `regex=` and the regular expression for the appropriate function. The regular expressions you must write are specified below. **NOTE: This is python code tabs and spacing matter.**

1. IPv6 pattern in long form, short form, or compressed form. Must ensure colons are used and 0-9 and a-f are used as part of the pattern. You may write a single helper method named `ipv6_helper`.
2. A password that contains at least 12 characters and includes at least one upper case character, two lower case characters, two digits, at least one punctuation mark. It cannot contain more than 3 consecutive lowercase characters, more than two consecutive numbers, or repeating the same number(s) consecutively more than one time (1212 is not allowed).
3. US Currency down to the penny (ex: \$123,456,789.23) and Euros (ex: 123.456.789,12) Must contain the comma and a beginning \$ for US and the period and comma for Euros.
4. E-mail address – Must contain @ and more than 1 character after the at symbol and before the dot. A dot or dash is optional in a string before the at symbol, but it is not allowed as the character right before the at symbol. After the at symbol must have at least two characters. The end of the email (after the at symbol and the dot) must contain at least two letters. Dots can't be consecutive. Can't contain eagles, or eastern all case insensitive. (Example: `stu.steiner@ewu.edu` is valid but `stu.steiner.@ewu.edu` is not valid. `a@b.c` is not valid)

NOTES

- We have provided `cscd_437_regex_methods.py`.
 - Write your code for the appropriate regular expression in the method provided.
 - You can't change our methods or code in any fashion, other than to add your regular expression code or to call the appropriate helper function.
 - You can't import any libraries
 - We have provided no tests.
 - We have provided everything but the regular expression code. (`regex=`the expression)
 - You must include a detailed explanation of each regex, meaning you must explain in detail what the regex does/how it works.
- **Your testing MUST be thorough and robust -- you will be heavily penalized if this is not the case. You should have at least 8 tests per problem.**

WHAT TO TURN IN:

- Submit a zip file that contains:
 - `cscd_437_regex_methods.py`
 - A detailed explanation of each regular expression and the output illustrating your robust testing for each regex. Name this file your last name first letter of first name lab6.pdf each item.
 - We should be able to download your Python file and run it with our testing file.
- Name your zip your last name first letter of first name lab6.zip (Example: `steinerslab6.zip`)