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import re #Importing regex

#class declaration
class PasswordAuthentication:

    #defining the init function
    def __init__(self, Password):
        self._Password = Password

    #Defining the business logic
    def Authentication(self, Password = ''):
        Password = self._Password
        UserPassword = re.split(r',', Password) #converting string into list when comma(,) is discovered

        try:
            Bool1 = False #Verification Boolian 1
            Bool2 = False #Verification Boolian 2
            Bool3 = False #Verification Boolian 3
            Bool4 = False #Verification Boolian 4
            Bool5 = False #Verification Boolian 5
            Bool6 = False #Verification Boolian 6
            Bool7 = False #Verification Boolian 7
            Bool8 = False #Verification Boolian 8

            for i in range(len(UserPassword)): #For loop will run for the length of list

                print("")

                Boolaz = re.search("[a-z]", UserPassword[i]) #Checking for alphabets from [a-z]
                if Boolaz:
                    Boolaz = True

                BoolAZ = re.search("[A-Z]", UserPassword[i]) #Checking for alphabets from [A-S]
                if BoolAZ:
                    BoolAZ = True

                Bool09 = re.search("[0-9]", UserPassword[i]) #Checking for numbers from [0-9]
                if Bool09:
                    Bool09 = True

                Boolsym = re.search("[$_#=@]", UserPassword[i]) #Checking for characters
                if Boolsym:
                    Boolsym = True

                Boolexp = re.search("[%!>()]", UserPassword[i]) #Checking for alphabets expressions
                if Boolexp:
                    Boolexp = True

                if len(UserPassword[i]) < 6: #Checking the length if less than 6
                    print(UserPassword[i], ' Failure Password must be at least 6 characters long.')
                    Bool1 = True

                elif len(UserPassword[i]) > 12: #Checking the length if greater than 12
                    print(UserPassword[i], " Failure Password must be smaller than 12 characters long.")
                    Bool2 = True

                elif Boolaz != True: #using if - elif - else so as to throw print only once per string in list
                    print(UserPassword[i], " Failure Password must contain at least one letter from a-z.")
                    Bool3 = True

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elif Bool09 != True:
    print(UserPassword[i], " Failure Password must contain at least one number from 0-9.")
    Bool4 = True

elif BoolAZ != True:
    print(UserPassword[i], " Failure Password must contain at least one letter from A-Z.")
    Bool5 = True

elif BoolSYM != True:
    print(UserPassword[i], " Failure Password must contain at least one letter from *$_#=@.")
    Bool6 = True

elif BoolExp == True:
    print(UserPassword[i], " Failure Password cannot contain %!(. ")
    Bool7 = True

else:
    print(UserPassword[i], " Success")
    Bool8 = False

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except:
    print("Exception Occured")

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finally:

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    #if error occurred even once show hints

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    if (Bool2 == True or Bool3 == True or Bool4 == True or Bool5 == True or Bool6 == True or Bool7
== True or Bool1 == True) or Bool8 == True:
        print('

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| Hint: Error messages for each check: |

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| 1. Password must be at least 6 characters long. |
| 2. Password must be at max 12 characters long. |
| 3. Password must contain at least one letter from <set_that_failed>. |
4. Password cannot contain %!(.

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#these will be called when the python script runs

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Password = input("Entre User Password: ")
Output = PasswordAuthentication(Password)
Output.Authentication()

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