import re

class BasePasswordManager:

def old\_passwords(self):

old\_password = ['012345', '2134siph', '2134sip$']

self.old\_password = old\_password[-1]

return self.old\_password

def get\_password(self):

current\_password = self.old\_password

self.current\_password = current\_password

return "Current password is " + self.current\_password

def is\_correct(self, password=input('Please enter your password: ')):

self.password = password

print("New passsword is the same as the current password:",self.password == self.current\_password)

return self.password

class PasswordManager(BasePasswordManager):

def get\_level(self):

self.security\_level = 0

check\_alphabat = False

check\_number = False

if self.password.isdigit():

self.security\_level = 0

print('Security level is',self.security\_level,' :WEAK')

print('Password consists of Digits only')

elif self.password.isalpha():

self.security\_level = 0 # For Security\_Level 0

print('Security level is',self.security\_level,' :WEAK')

print('Password consists of Alphabets only')

elif check\_alphabet == False and check\_number == False and (bool(re.match('^[a-zA-Z0-9]\*$', self.password)) == True):

for i in self.password:

if i.isalpha():

check\_alphabet = True

for j in self.password:

if j.isnumeric():

check\_number = True

if check\_alphabet == True and check\_number == True:

self.security\_level = 1 # For Security\_Level 1

print('Security Level is', self.security\_level, ': MODERATE')

print('Password is alphanumeric with NO special characters')

elif check\_alphabet == False and check\_number == False:

for i in self.password:

if i.isalpha():

check\_alphabet = True

for j in self.password:

if j.isnumeric():

check\_number = True

if check\_alphabet == True and check\_number == True and (bool(re.match('^[a-zA-Z0-9]\*$', self.password)) == False):

self.security\_level = 2 # For Security\_Level 2

print('Security level is', self.security\_level, ':STRONG')

print('Password is alphanumeric with special characters')

else:

self.security\_level = 1

print('Security level is', self.security\_level, ':MODERATE')

print('Password contains special characters with either numbers or alphabets only')

def set\_password(self):

if len(self.password) <8:

print("New Password must have 8 characters or More")

print("Password Change : UNSUCCESSFUL")

elif self.security\_level <2:

print("New password must contain at least 1 special character with numbers and alphabets")

print("Password Change : UNSUCCESSFUL")

elif self.password == self.current\_password:

print("Password Change: No Changes Detected")

else:

print("Password Change:SUCCESSFUL")

print()

current = PasswordManager()

current.old\_passwords()

current.get\_password()

current.is\_correct()

current.get\_level()

current.set\_password()