- **Create a Password Strength Indicator for a login page of our website**

Provide a visual indicator showing the strength of the password (e.g., weak, medium, strong).

Consider factors like length, presence of uppercase and lowercase letters, digits, and special characters.

Hint: If password length is >8 it is strong, greater than 6 and less than 8 is medium, less than 5 is weak

Solution :

Code

```
import string

import getpass

def check_password_strength():

  password = getpass.getpass('Enter the password: ')

  strength = 0

  remarks = ''

  lower_count = upper_count = num_count = wspace_count = special_count = 
0

  for char in list(password):

    if char in string.ascii_lowercase:

      lower_count += 1

    elif char in string.ascii_uppercase:

      upper_count += 1

    elif char in string.digits:

      num_count += 1

    elif char == ' ':

      wspace_count += 1

    else:

      special_count += 1
```

```
if lower_count >= 1:
    strength += 1
if upper_count >= 1:
    strength += 1
if num_count >= 1:
    strength += 1
if wspace_count >= 1:
    strength += 1
if special_count >= 1:
    strength += 1


if strength == 1:
    remarks = ('That\'s a very bad password.'
        ' Change it as soon as possible.')
elif strength == 2:
    remarks = ('That\'s a weak password.'
        ' You should consider using a tougher password.')
elif strength == 3:
    remarks = 'Your password is okay, but it can be improved.'
elif strength == 4:
    remarks = ('Your password is hard to guess.'
        ' But you could make it even more secure.')
elif strength == 5:
    remarks = ('Now that\'s one hell of a strong password!!!'
        ' Hackers don\'t have a chance guessing that password!')
```

```
  print('Your password has:-')
  print(f'{lower_count} lowercase letters')
  print(f'{upper_count} uppercase letters')
  print(f'{num_count} digits')
  print(f'{wspace_count} whitespaces')
  print(f'{special_count} special characters')
  print(f'Password Score: {strength / 5}')
  print(f'Remarks: {remarks}')

def check_pwd(another_pw=False):
  valid = False
  if another_pw:
    choice = input(
      'Do you want to check another password\'s strength (y/n) : ')
  else:
    choice = input(
      'Do you want to check your password\'s strength (y/n) : ')
  while not valid:
    if choice.lower() == 'y':
      return True
    elif choice.lower() == 'n':
      print('Exiting...')
      return False
    else:
      print('Invalid input...please try again. \n')
```

```
if __name__ == '__main__':
  print('===== Welcome to Password Strength Checker =====')
  check_pw = check_pwd()
  while check_pw:
     check_password_strength()
     check_pw = check_pwd(True)
```

OUTPUT:

Do you want to check your password's strength (y/n) : y

Enter the password: nikhil@175

Your password has:-

6 lowercase letters

0 uppercase letters

3 digits

0 whitespaces

1 special characters

Password Score: 0.6

Remarks: Your password is okay, but it can be improved.

Do you want to check another password's strength (y/n) : y

Enter the password: Nik@175

Your password has:-

2 lowercase letters

1 uppercase letters

3 digits

0 whitespaces

1 special characters

Password Score: 0.8

Remarks: Your password is hard to guess. But you could make it even more secure.

Do you want to check another password's strength (y/n) : y

Enter the password: nik12

Your password has:-

3 lowercase letters

0 uppercase letters

2 digits

0 whitespaces

0 special characters

Password Score: 0.4

Remarks: That's a weak password. You should consider using a tougher password.

Do you want to check another password's strength (y/n) : y

Enter the password: Nikhil@175

Your password has:-

5 lowercase letters

1 uppercase letters

3 digits

0 whitespaces

1 special characters

Password Score: 0.8

Remarks: Your password is hard to guess. But you could make it even more secure.

Do you want to check another password's strength (y/n) : y

Enter the password: github1115

Your password has:-

6 lowercase letters

0 uppercase letters

4 digits

0 whitespaces

0 special characters

Password Score: 0.4

Remarks: That's a weak password. You should consider using a tougher password.

Do you want to check another password's strength (y/n) : n

Exiting...