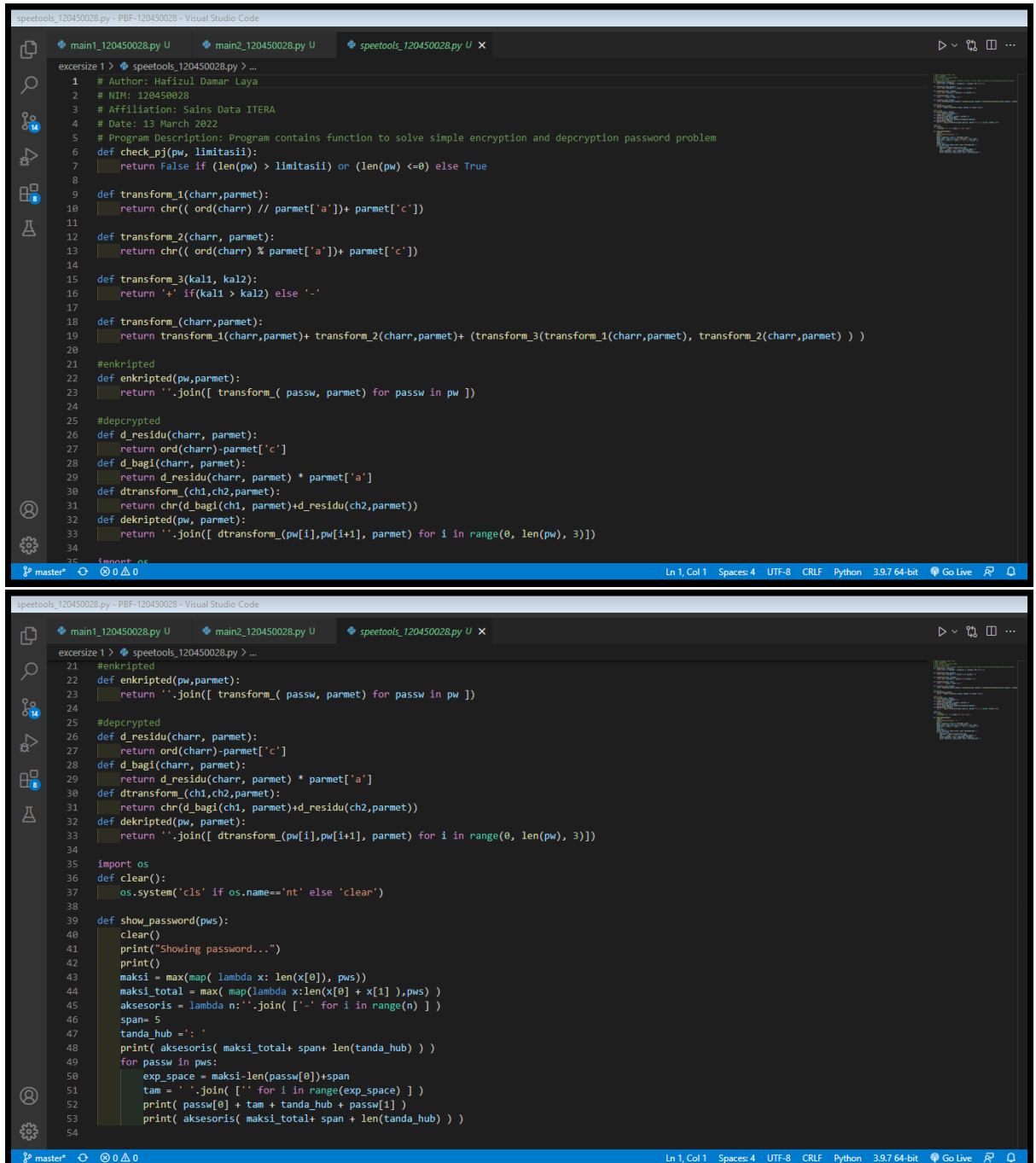


Nama: Hafizul Damar Laya

NIM: 120450028

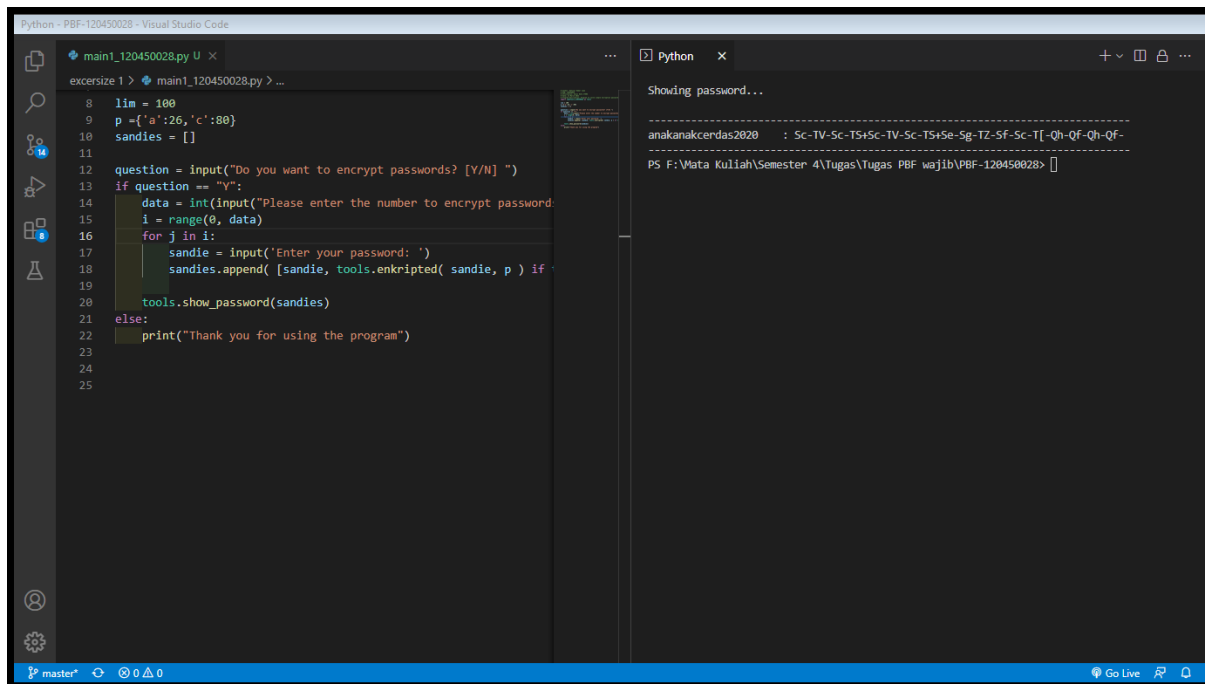
Kelas: PBF RB

1. Bantulah user tersebut dengan membuatkan sebuah program yang secara otomatis mengubah password yang di input menjadi terenkripsi sesuai aturan tersebut!



```
1 # Author: Hafizul Damar Laya
2 # NIM: 120450028
3 # Affiliation: Sains Data ITERA
4 # Date: 13 March 2022
5 # Program Description: Program contains function to solve simple encryption and decryption password problem
6 def check_pw(pw, limitasii):
7     return False if (len(pw) > limitasii) or (len(pw) <= 0) else True
8
9 def transform_1(charr,paramet):
10     return chr(( ord(charr) // paramet['a'])+ paramet['c'])
11
12 def transform_2(charr, paramet):
13     return chr(( ord(charr) % paramet['a'])+ paramet['c'])
14
15 def transform_3(kal1, kal2):
16     return '+' if(kal1 > kal2) else '-'
17
18 def transform_(charr,paramet):
19     return transform_1(charr,paramet)+ transform_2(charr,paramet)+ (transform_3(transform_1(charr,paramet), transform_2(charr,paramet) ))
20
21 #enkripted
22 def enkripted(pw,paramet):
23     return ''.join([ transform_( passw, paramet) for passw in pw ])
24
25 #decrypted
26 def d_residu(charr, paramet):
27     return ord(charr)-paramet['c']
28 def d_bagi(charr, paramet):
29     return d_residu(charr, paramet) * paramet['a']
30 def dtransform_(ch1,ch2,paramet):
31     return chr(d_bagi(ch1, paramet)+d_residu(ch2,paramet))
32 def dekripted(pw, paramet):
33     return ''.join([ dtransform_(pw[i],pw[i+1], paramet) for i in range(0, len(pw), 3)])
34
35 import os
36 def clear():
37     os.system('cls' if os.name=='nt' else 'clear')
38
39 def show_password(pws):
40     clear()
41     print("Showing password...")
42     print()
43     maksi = max(map( lambda x: len(x[0]), pws))
44     maksi_total = max( map(lambda x:len(x[0] + x[1] ),pws) )
45     aksesoris = lambda n:''.join( ['-'] for i in range(n) )
46     span= 5
47     tanda_hub =': '
48     print( aksesoris( maksi_total+ span+ len(tanda_hub) ) )
49     for passw in pws:
50         exp_space = maksi-len(passw[0])+span
51         tam = ''.join( ['-'] for i in range(exp_space) )
52         print( passw[0] + tam + tanda_hub + passw[1] )
53         print( aksesoris( maksi_total+ span + len(tanda_hub) ) )
54
```

2. Apa output yang dihasilkan dari program tersebut jika input password adalah 'anakanakcerdas2020' ?



The screenshot shows a Python script in Visual Studio Code. The script defines a function to encrypt a password using a Caesar cipher. The user has entered the password 'anakanakcerdas2020'. The output shows the encrypted password: 'Sc-TV-Sc-TS+Sc-TV-Sc-TS+Se-Sg-TZ-Sf-Sc-T[-Qh-Qf-Qh-Qf-'. The terminal window shows the command prompt and the output of the program.

```
Python - PBF-120450028 - Visual Studio Code
main1_120450028.py x
exercize 1 > main1_120450028.py > ...
8   lim = 100
9   p = {'a':26,'c':80}
10  sandies = []
11
12  question = input("Do you want to encrypt passwords? [Y/N] ")
13  if question == "Y":
14      data = int(input("Please enter the number to encrypt password: "))
15      i = range(0, data)
16      for j in i:
17          sandie = input('Enter your password: ')
18          sandies.append( [sandie, tools.enkripped( sandie, p ) if
19                          tools.show_password(sandies)
20      else:
21          print("Thank you for using the program")
22
23
24
25
```

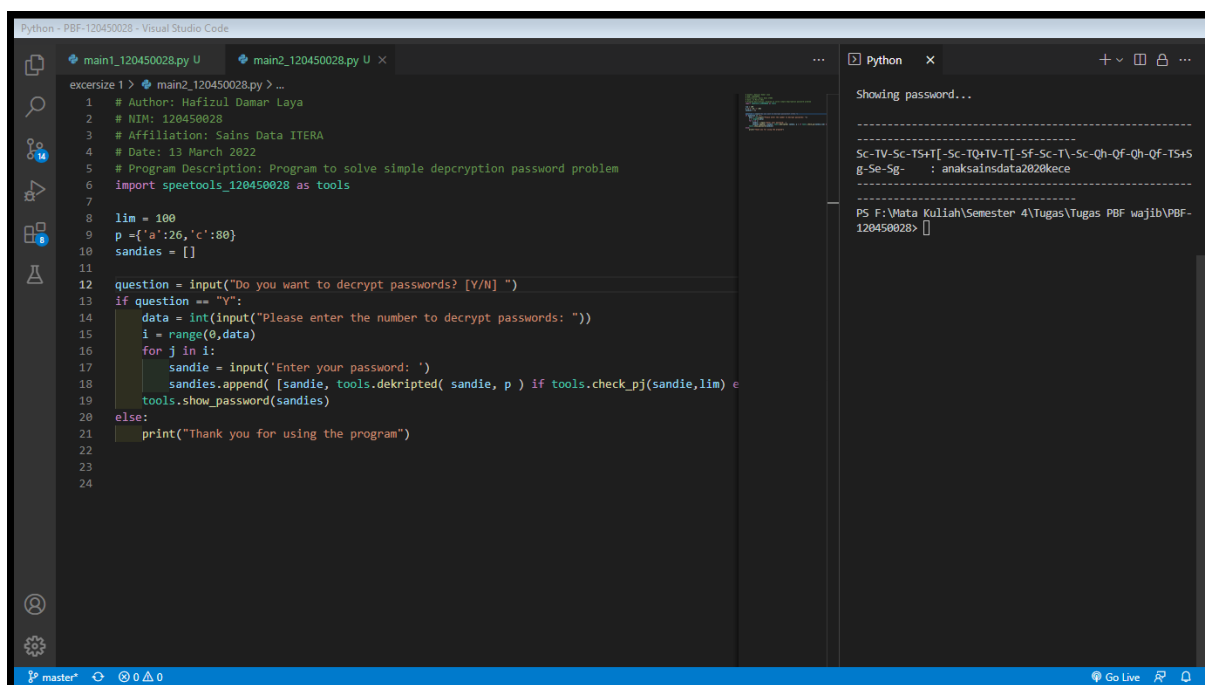
Showing password...

anakanakcerdas2020 ; Sc-TV-Sc-TS+Sc-TV-Sc-TS+Se-Sg-TZ-Sf-Sc-T[-Qh-Qf-Qh-Qf-

PS F:\Mata Kuliah\Semester 4\Tugas\Tugas PBF wajib\PBF-120450028> []

Password enkripsinya Sc-TV-Sc-TS+Sc-TV-Sc-TS+Se-Sg-TZ-Sf-Sc-T[-Qh-Qf-Qh-Qf-

3. User tersebut lupa password asli yang dia inputkan ke dalam program tersebut, password setelah dienkripsi adalah 'Sc-TV-Sc-TS+T[-Sc-TQ+TV-T[-Sf-Sc-T\Sc-Qh-Qf-Qh-Qf-TS+Sg-Se-Sg-'. Bantulah user tersebut menemukan password aslinya!



The screenshot shows a Python script in Visual Studio Code. The script defines a function to decrypt a password using a Caesar cipher. The user has entered the encrypted password 'Sc-TV-Sc-TS+T[-Sc-TQ+TV-T[-Sf-Sc-T\Sc-Qh-Qf-Qh-Qf-TS+Sg-Se-Sg-'. The output shows the decrypted password: 'anaksainsdata20kece'. The terminal window shows the command prompt and the output of the program.

```
Python - PBF-120450028 - Visual Studio Code
main1_120450028.py U  main2_120450028.py x
exercize 1 > main2_120450028.py > ...
1  # Author: Hafizul Damar Laya
2  # NIM: 120450028
3  # Affiliation: Sains Data ITERA
4  # Date: 13 March 2022
5  # Program Description: Program to solve simple decryption password problem
6  import speetools_120450028 as tools
7
8  lim = 100
9  p = {'a':26,'c':80}
10  sandies = []
11
12  question = input("Do you want to decrypt passwords? [Y/N] ")
13  if question == "Y":
14      data = int(input("Please enter the number to decrypt passwords: "))
15      i = range(0,data)
16      for j in i:
17          sandie = input('Enter your password: ')
18          sandies.append( [sandie, tools.dekripped( sandie, p ) if tools.check_pj(sandie,lim) e
19                          tools.show_password(sandies)
20      else:
21          print("Thank you for using the program")
22
23
24
```

Showing password...

Sc-TV-Sc-TS+T[-Sc-TQ+TV-T[-Sf-Sc-T\Sc-Qh-Qf-Qh-Qf-TS+Sg-Se-Sg- : anaksainsdata20kece

PS F:\Mata Kuliah\Semester 4\Tugas\Tugas PBF wajib\PBF-120450028> []

Password aslinya: anakanaksainsdata20kece