MANIPAL UNIVERSITY JAIPUR

SIGN-UP INFORMATION VALIDATION

(using Python)

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INTRODUCTION

WHAT IS A SIGN-UP PAGE?

It is a registration page on most websites which enables users and organizations to independently register and gain access to your system.

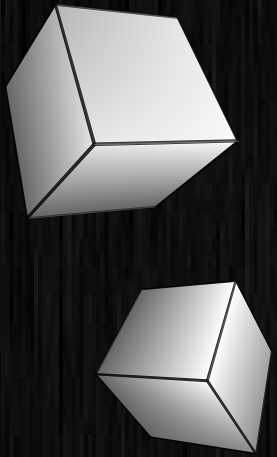
EXAMPLES OF METHODS OF SIGN-UP

1) Using their email ID and password.
2) Using their phone number.

WHAT ARE THE ADVANTAGES OF SIGNING UP?

Sign-ups are used :

- to capture user info, specifically emails and contact numbers
- to advertise long run products and services
- to charge for some content or offer varied levels of access for users
- to make registered users feel special by giving them access to exclusive content
- to help users begin where they left off when they last logged in



ALGORITHMS

EMAIL ADDRESS VALIDATION

(1) Start.

(2) Input email ID.

(3) If there are whitespaces in it, print "Invalid" and stop.

(4) Check if exactly one '@' is present in the input string. If yes,split the local part and domain.

(5) Check if local part starts with a letter. If not, print "Invalid" and stop.

(6) Check if the domain is present in a given list of domains. If not, print "Invalid" and stop.

(7) Email is valid. Print "Valid".

(8) Stop.

PASSWORD VALIDATION

(1) Start. Take user input Password.

(2) Check whether password length is between 8 to 16 characters. If not, print "Invalid" and stop.

(3) Traversing through the password, check whether password contains any space. If yes, print "Invalid" and stop.

(4) Check whether password contains at least one digit(0-9). If not, print "Invalid" and stop.

(5) Check whether password contains at least one lowercase letter(a-z). If not, print "Invalid" and stop.

(6) Check whether password contains one uppercase letter(A-Z). If not, print "Invalid" and stop.

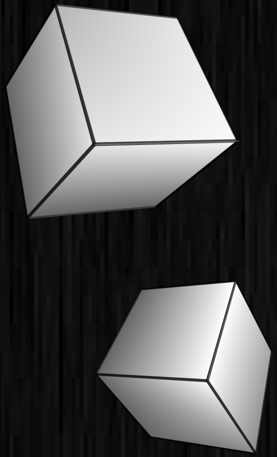
(7) Check whether password contains at least one special character (@, #, %, &, !, $, etc….). If not, print "Invalid" and stop.

(8) Password is Valid. Print "Valid".

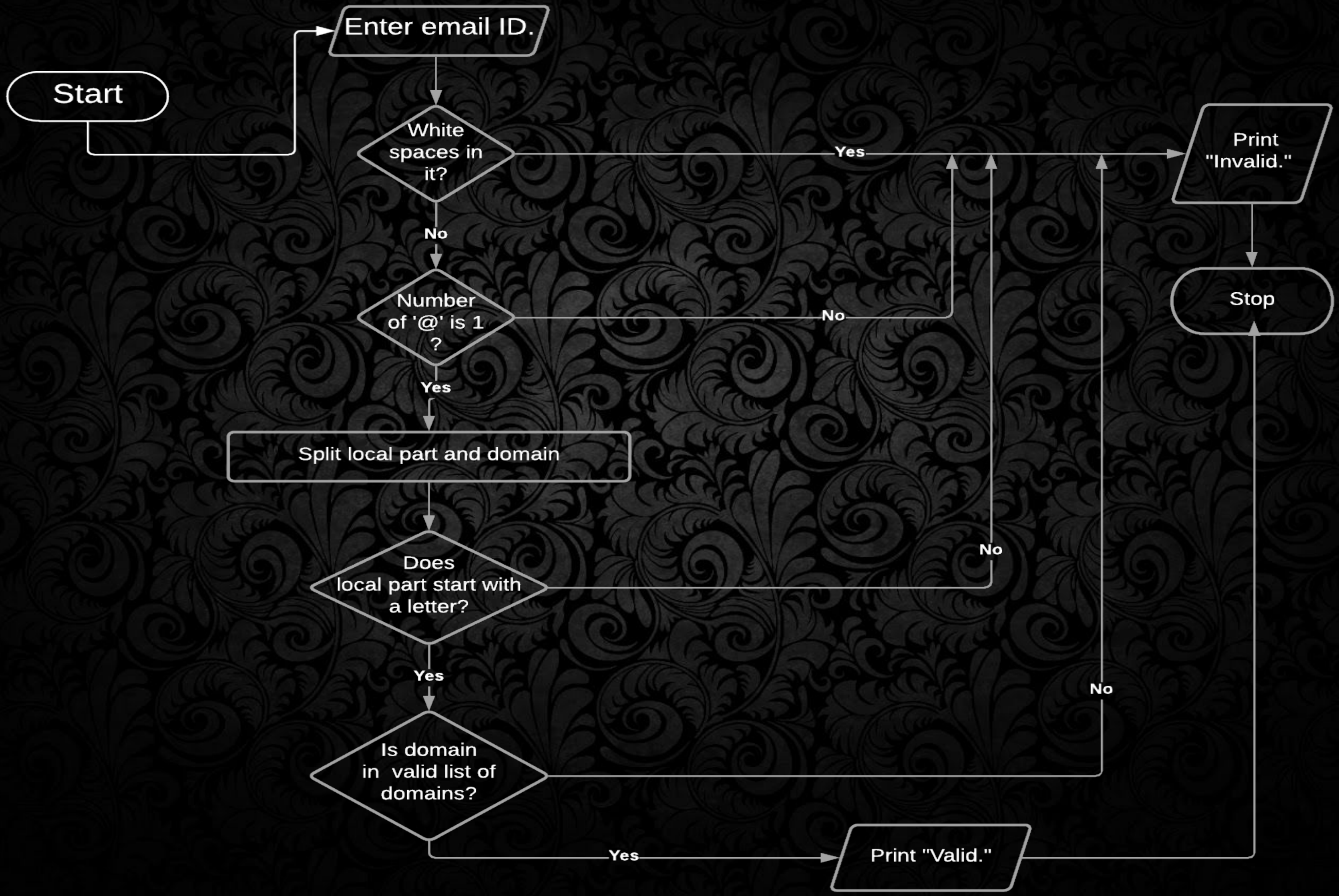
(9) Stop.

PHONE NUMBER VALIDATION

1) Start.
2) Input contact number.
3) Split the number.The last ten digits would be the phone number, and the rest would be the country code.
4) Check whether the mobile number has only digits. If not, print "Invalid". Stop.
5) Check if the country code is valid, using the list of codes. If not, print "Invalid". Stop.
6) Check whether phone number starts with 0. If it does, print "Invalid". Stop.
7) Phone number is valid. Print "Valid phone number."
8) Stop.



FLOWCHARTS



Start

Enter email ID.

White spaces in it?

Number of '@' is 1 ?

Split local part and domain

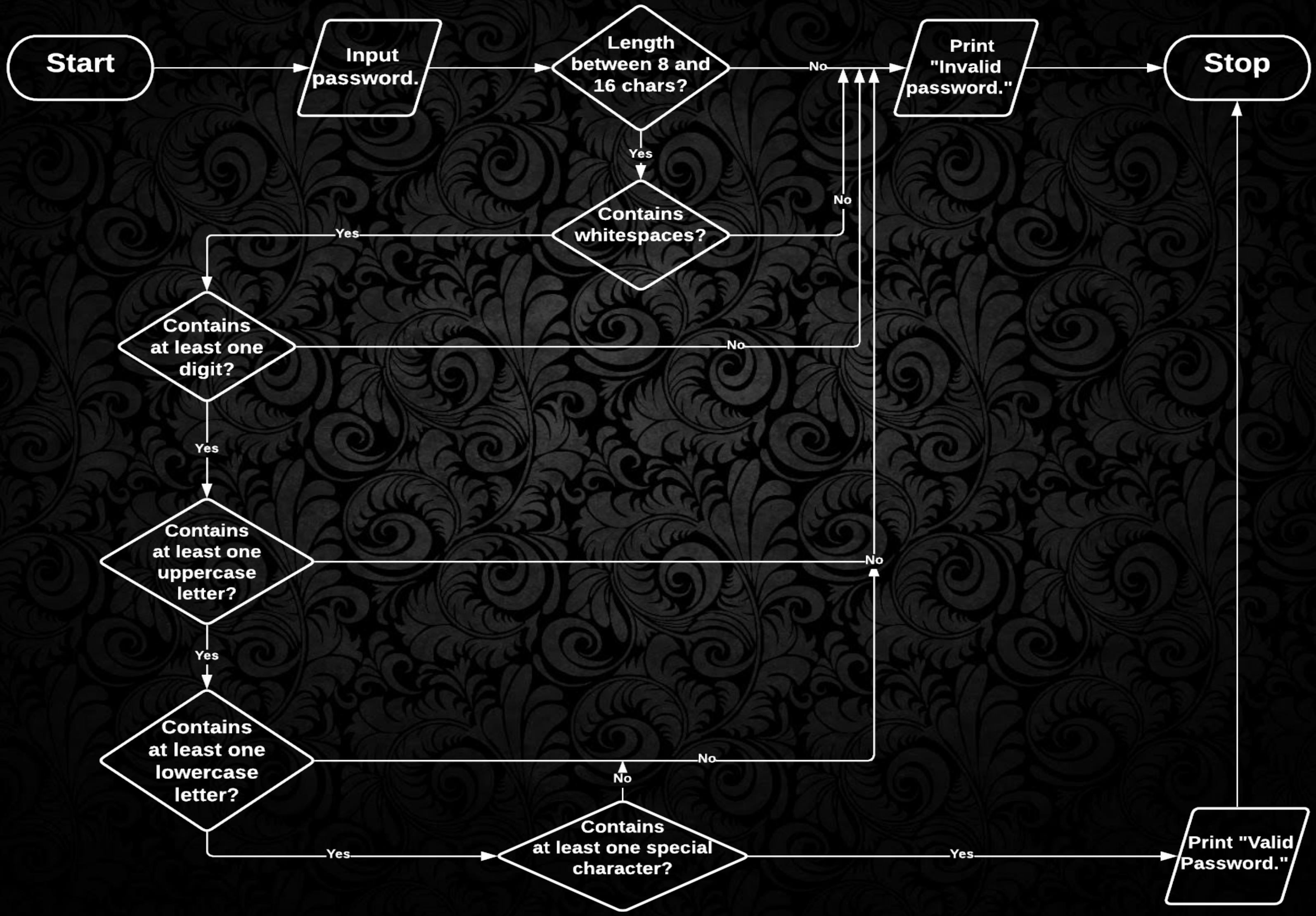
Does local part start with a letter?

Is domain in valid list of domains?

Print "Valid."

Print "Invalid."

Stop



Start

Input password.

Length between 8 and 16 chars?

Contains whitespaces?

Contains at least one digit?

Contains at least one uppercase letter?

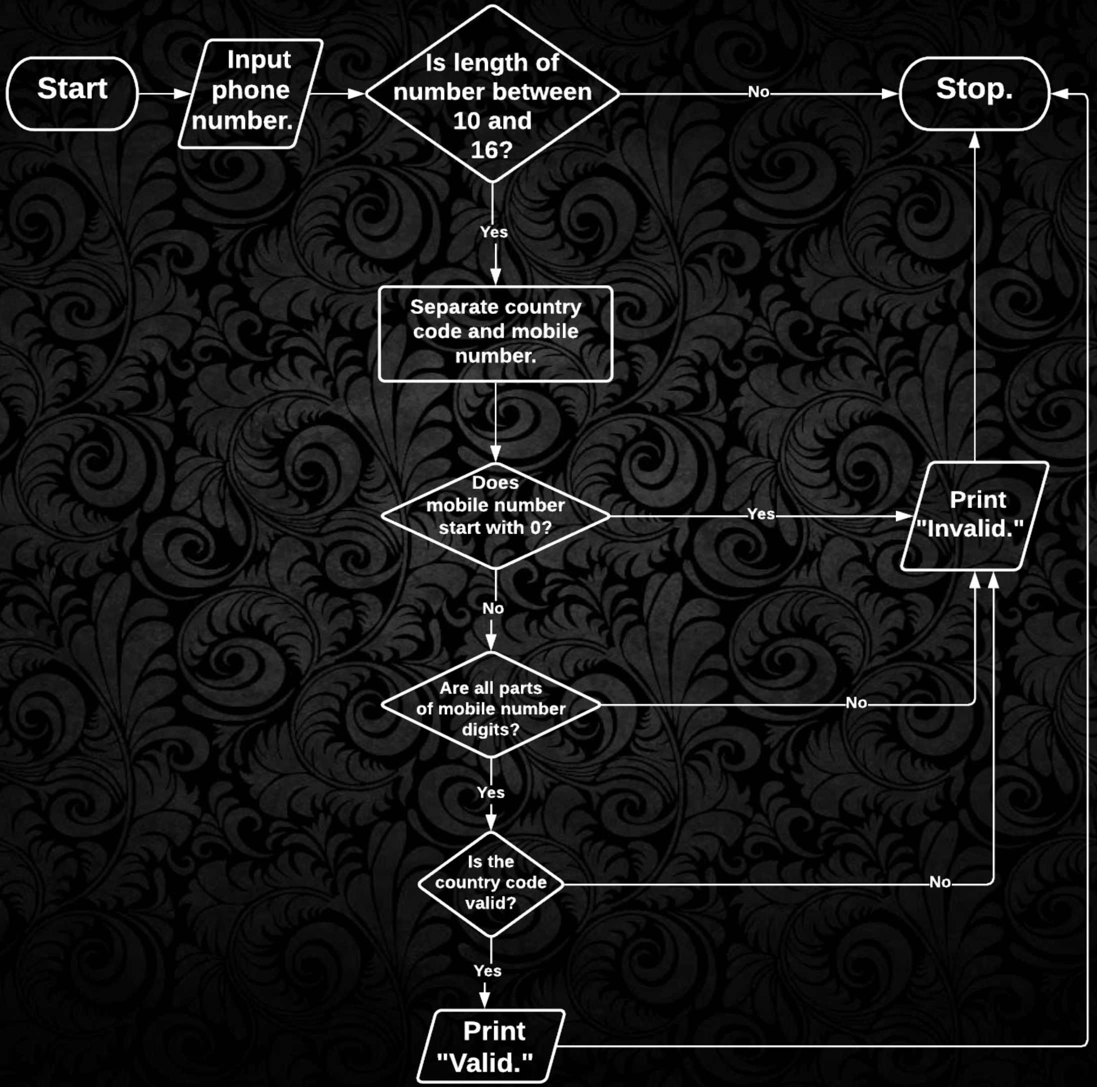
Contains at least one lowercase letter?

Contains at least one special character?

Print "Invalid password."

Print "Valid Password."

Stop

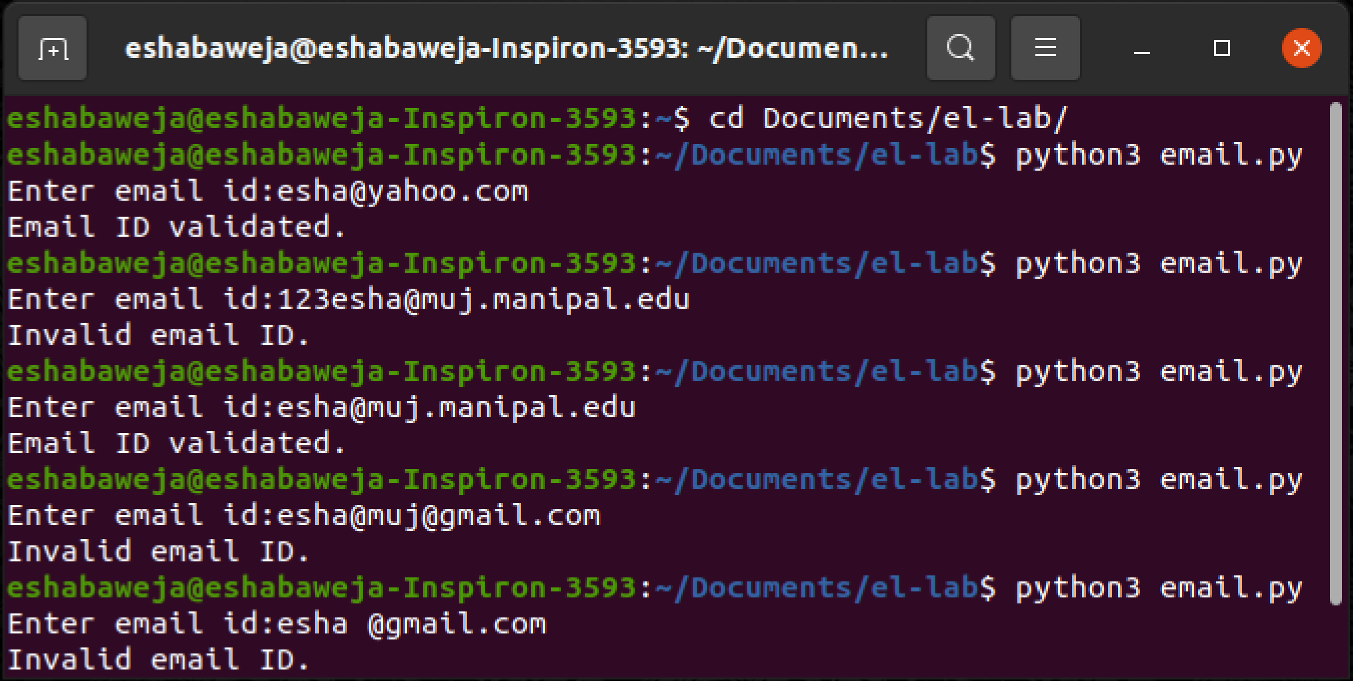

Start
Input phone number.
Is length of number between 10 and 16?
No
Stop.
Yes
Separate country code and mobile number.
Does mobile number start with 0?
Yes
Print "Invalid."
No
Are all parts of mobile number digits?
No
Yes
Is the country code valid?
No
Yes
Print "Valid."

PROGRAMS AND THEIR OUTPUTS

```
#A simple program to validate the email input by the user.
email = str(input("Enter email id:"))
ats=0

for i in email:
    if (i==' '):
        print ("Invalid email ID.")
    if (i=='@'):
         ats=ats+1

domains = [
  "aol.com", "att.net", "comcast.net", "facebook.com", "gmail.com", "gmx.com", "googlemail.com",
  "google.com", "hotmail.com", "hotmail.co.uk", "mac.com", "me.com", "mail.com", "msn.com",
  "live.com", "sbcglobal.net", "verizon.net", "yahoo.com", "yahoo.co.uk",
"email.com", "fastmail.fm", "games.com" , "gmx.net", "hush.com", "hushmail.com", "icloud.com",
  "iname.com", "inbox.com", "lavabit.com", "love.com" , "outlook.com", "pobox.com", "protonmail.ch",
"protonmail.com", "tutanota.de", "tutanota.com", "tutamail.com", "tuta.io",
 "keemail.me", "rocketmail.com" , "safe-mail.net", "wow.com" , "ygm.com" ,
  "ymail.com", "zoho.com", "yandex.com",
  "bellsouth.net", "charter.net", "cox.net", "earthlink.net", "juno.com",
  "btinternet.com", "virginmedia.com", "blueyonder.co.uk", "freeserve.co.uk", "live.co.uk",
  "ntlworld.com", "o2.co.uk", "orange.net", "sky.com", "talktalk.co.uk", "tiscali.co.uk",
  "virgin.net", "wanadoo.co.uk", "bt.com",
  "sina.com", "sina.cn", "qq.com", "naver.com", "hanmail.net", "daum.net", "nate.com", "yahoo.co.jp",
"yahoo.co.kr", "yahoo.co.id", "yahoo.co.in", "yahoo.com.sg", "yahoo.com.ph", "163.com", "yeah.net",
"126.com", "21cn.com", "aliyun.com", "foxmail.com",
  "hotmail.fr", "live.fr", "laposte.net", "yahoo.fr", "wanadoo.fr", "orange.fr", "gmx.fr", "sfr.fr", "neuf.fr",
"free.fr",
  "gmx.de", "hotmail.de", "live.de", "online.de", "t-online.de", "web.de", "yahoo.de",
  "libero.it", "virgilio.it", "hotmail.it", "aol.it", "tiscali.it", "alice.it", "live.it", "yahoo.it", "email.it", "tin.it",
"poste.it", "teletu.it",
  "mail.ru", "rambler.ru", "yandex.ru", "ya.ru", "list.ru",
  "hotmail.be", "live.be", "skynet.be", "voo.be", "tvcablenet.be", "telenet.be",
  "hotmail.com.ar", "live.com.ar", "yahoo.com.ar", "fibertel.com.ar", "speedy.com.ar", "arnet.com.ar",
  "yahoo.com.mx", "live.com.mx", "hotmail.es", "hotmail.com.mx", "prodigy.net.mx",
  "yahoo.ca", "hotmail.ca", "bell.net", "shaw.ca", "sympatico.ca", "rogers.com",
  "yahoo.com.br", "hotmail.com.br", "outlook.com.br", "uol.com.br", "bol.com.br", "terra.com.br",
"ig.com.br", "itelefonica.com.br", "r7.com", "zipmail.com.br", "globo.com", "globomail.com",
"oi.com.br","muj.manipal.edu"
]
```

```
if (ats==1):                    #a valid email address has exactly one 'at' sign
    x = email.split("@")
    local_part = x[0]
    domain = x[1]

    if local_part[0].isalpha():
        for i in domains:
            if (i == domain):
                print("Email ID validated.")

    else:
        print("Invalid email ID.")

else:
    print("Invalid email ID.")
```

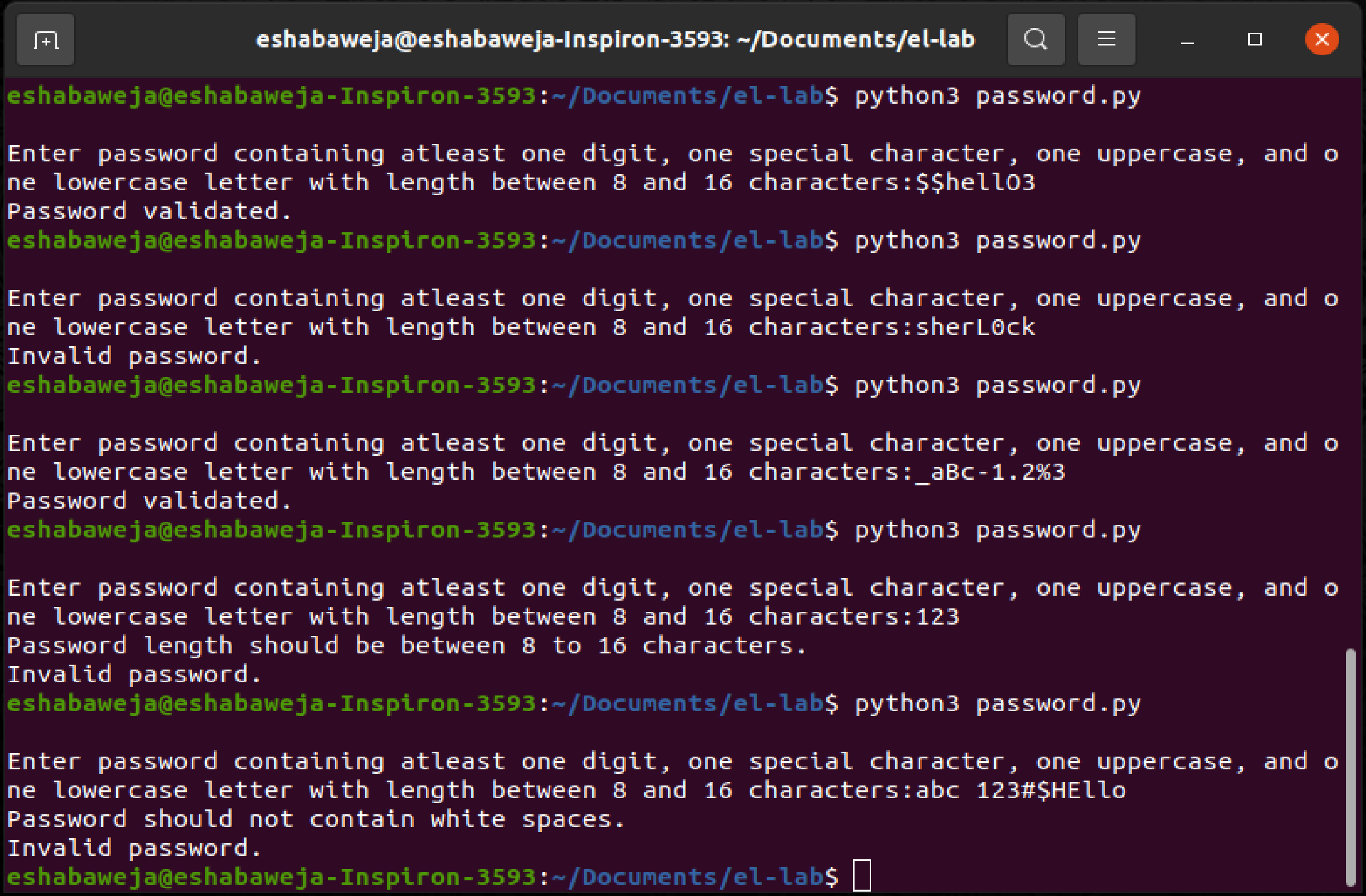
Output for email-validator program



```
eshabaweja@eshabaweja-Inspiron-3593:~$ cd Documents/el-lab/
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 email.py
Enter email id:esha@yahoo.com
Email ID validated.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 email.py
Enter email id:123esha@muj.manipal.edu
Invalid email ID.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 email.py
Enter email id:esha@muj.manipal.edu
Email ID validated.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 email.py
Enter email id:esha@muj@gmail.com
Invalid email ID.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 email.py
Enter email id:esha @gmail.com
Invalid email ID.
```

```
#A program to validate password
password = input("Enter password containing atleast one digit, one special character, one
uppercase, and one lowercase letter with length between 8 and 16 characters: ")
count_up =0
count_low =0
count_num =0
count_spec =0

special_chars = ['!', '@','#','$','%','^','&',
                '*','(',')','-','_','.']

if (len(password)>7 and len(password)<17):
    for i in password:
        if i == ' ':
            print("Password should not contain white spaces.")
            break

        elif i.isupper(): #checking atleast one uppercase
            count_up = 1

        elif i.islower(): #checking atleast one lowercase
            count_low = 1
        elif i.isdigit(): #checking atleast one digit
            count_num = 1

        elif i in special_chars:
            count_spec = 1

else:
    print("Password length should be between 8 to 16 characters.")

if (count_up==1 and count_low==1 and count_num ==1 and count_spec==1):
    print("Password validated.")

else:
    print("Invalid password.")
```

Output for password-validator program

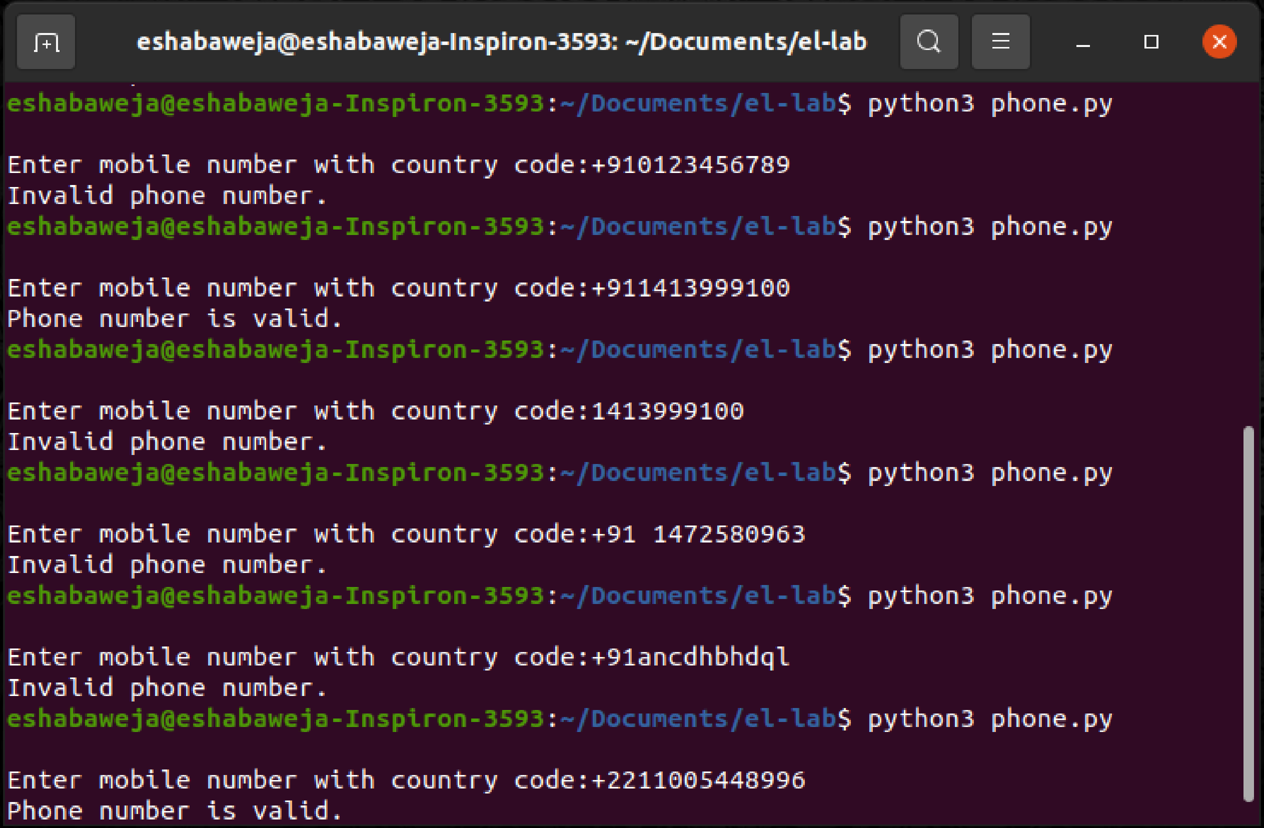


```
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 password.py

Enter password containing atleast one digit, one special character, one uppercase, and o
ne lowercase letter with length between 8 and 16 characters:$$hellO3
Password validated.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 password.py

Enter password containing atleast one digit, one special character, one uppercase, and o
ne lowercase letter with length between 8 and 16 characters:sherL0ck
Invalid password.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 password.py

Enter password containing atleast one digit, one special character, one uppercase, and o
ne lowercase letter with length between 8 and 16 characters:_aBc-1.2%3
Password validated.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 password.py

Enter password containing atleast one digit, one special character, one uppercase, and o
ne lowercase letter with length between 8 and 16 characters:123
Password length should be between 8 to 16 characters.
Invalid password.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 password.py

Enter password containing atleast one digit, one special character, one uppercase, and o
ne lowercase letter with length between 8 and 16 characters:abc 123#$HEllo
Password should not contain white spaces.
Invalid password.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ 
```

```
#A simple program to check a phone number

num = input("\nEnter mobile number with country code:")
mob,coun = 0,0    #flags
country_codes = ["+93","+355","+213","+1-684","+376","+244","+1-264","+672","+1-268","+54","+374","+297",
                "+61","+43","+994","+1-242","+973","+880","+1-246","+375","+32","+501","+229","+1-441",
                "+975","+591","+387","+267","+55","+673","+359","+226","+257","+855","+237","+1","+238",
                "+1-345","+236","+235","+56","+86","+53","+61","+57","+269","+243","+242","+682","+506",
                "+225","+385","+53","+357","+420","+45","+253","+1-767","+1-809","+1-829","+670","+593",
                "+20","+503","+240","+291","+372","+251","+500","+298","+679","+358","+33","+594","+689",
                "+241","+220","+995","+49","+233","+350","+30","+299","+1-473","+590","+1-671","+502",
                "+224","+245","+592","+509","+504","+852","+36","+354","+91","+62","+98","+964","+353",
                "+972","+39","+1-876","+81","+962","+7","+254","+686","+850","+82","+965","+996","+856",
                "+371","+961","+266","+231","+218","+423","+370","+352","+853","+389","+261","+265","+60",
                "+960","+223","+356","+692","+596","+222","+230","+269","+52","+691","+373","+377","+976",
                "+1-664","+212","+258","+95","+264","+674","+977","+31","+599","+687","+64","+505","+227",
                "+234","+683","+672","+1-670","+47","+968","+92","+680","+970","+507","+675","+595","+51",
                "+63","+48","+351","+1-787","+1-939","+974","+262","+40","+7","+250","+290","+1-869","+263",
                "+1-758","+508","+1-784","+685","+378","+239","+966","+221","+248","+232","+65","+421",
                "+386","+677","+252","+27","+34","+94","+249","+597","+268","+46","+41","+963","+886","+967",
                "+992","+255","+66","+690","+676","+1-868","+216","+90","+993","+1-649","+688","+256","+380",
                "+971","+44","+1","+598","+998","+678","+418","+58","+84","+1-284","+1-340","+681","+260"]
```

```
if (len(num)>=10 and len(num)<=16):

    country_code = num[0:-10]    #using string slices
    mobile_no = num[-10:len(num)]    #the last ten digits would be the mobile number

    if (mobile_no.isdigit() and mobile_no[0] != '0'):    #checking mobile number is valid
        mob = mob+1

    for i in country_codes:    #checking country code is valid
        if (i == country_code):
            coun = coun+1

if (mob==1 and coun ==1):
    print("Phone number is valid.")

else:
    print("Invalid phone number.")
```

Output for phone number validator program



```
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:+910123456789
Invalid phone number.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:+911413999100
Phone number is valid.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:1413999100
Invalid phone number.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:+91 1472580963
Invalid phone number.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:+91ancdhbhdql
Invalid phone number.
eshabaweja@eshabaweja-Inspiron-3593:~/Documents/el-lab$ python3 phone.py

Enter mobile number with country code:+2211005448996
Phone number is valid.
```

THANK YOU