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print('hello world');

input()

v0=input('what is your name : '); print(v0);

help()

help(input);

exit()

exit();

import

import math; print(math.sin(math.pi/4));

from - import

from math import sin, pi; print(sin(pi/4));

single/multi comment line

# this is a single comment line

"""

this is

multiline

comment line

"""

**mathematical operators**

+, -, \*, /, \*\*, %, //, ==, !=, <, <=, >, >=, +=, \*=

5 + 3 --> 8

5 - 2 --> 2

5 \* 3 --> 15

5 / 3 --> 1

5.0 / 3 --> 1.6666666666666667

5 / 3.0 --> 1.6666666666666667

5 \*\* 3 --> 125

17 % 5 --> 2

17 // 5 --> 3

5 == 3 --> False

5 != 3 --> True

5 < 3 --> False

5 <= 3 --> False

5 > 3 --> True

5 >= 3 --> True

v0=2; v0+=4; v0 --> 6

v0=2; v0\*=4; v0 --> 8

**mathematical functions**

int()

v0=2.0; int(v0); --> 2

float()

v0=2; float(v0); --> 2.0

round()

v0=5.0/3; round(v0,3); --> 1.667

math.floor()

import math; v0=5.0/3; math.floor(v0); --> 1.0

math.ceil()

import math; v0=5.0/3; math.ceil(v0); --> 2.0

math.trunc()

import math; v0=5.0/3; math.trunc(v0); --> 1

math.fabs()

import math; v0=-5; math.fabs(v0); --> 5.0

math.fmod()

import math; math.fmod(17,5); --> 2.0

math.modf()

import math; math.modf(17.75); --> (0.75, 17.0)

math.copysign()

import math; math.copysign(5,-3); --> -5.0

math.factorial()

import math; math.factorial(5); --> 120

math.exp()

import math; math.exp(2); --> 7.389

math.log()

import math; math.log(math.exp(1)); --> 1.0

math.log10()

import math; math.log10(100); --> 2.0

math.log()

import math; math.log(625,5); --> 4.0

math.pi

import math; math.pi; --> 3.141592653589793

math.sin()

import math; math.sin(math.pi/4); --> 0.7071067811865475

math.cos()

import math; math.cos(math.pi/6); --> 0.8660254037844387

math.tan()

import math; math.tan(math.pi/6); --> 0.5773502691896257

**CHAPTER II - DATA STRUCTURE OF PYTHON**

**strings**

str(x)

v0=5.0; str(v0); --> '5.0'

product of string

v0='a'; v0\*10; --> 'aaaaaaaaaa'

sum of strings

v0='python'; v1=2.7; print('i am using ' + v0 + ' ' + str(v1) + ' version'); --> i am using python 2.7 version

format()

v0='python'; v1=2.7; print('i am using {} {} version').format(v0,v1);  --> i am using python 2.7 version

upper()

'i am using PYTHON 2.7 version'.upper();  --> 'I AM USING PYTHON 2.7 VERSION'

lower()

'i am using PYTHON 2.7 version'.lower(); --> 'i am using python 2.7 version'

capitalize()

'i am using PYTHON 2.7 version'.capitalize(); --> 'I am using python 2.7 version'

len(x)

len('i am using PYTHON 2.7 version'); --> 29

substrings

v0='i am using PYTHON 2.7 version'; v0[0]; --> 'i'

v0='i am using PYTHON 2.7 version'; v0[:]; --> 'i am using PYTHON 2.7 version'

v0='i am using PYTHON 2.7 version'; v0[11:]; --> 'PYTHON 2.7 version'

v0='i am using PYTHON 2.7 version'; v0[:21]; --> 'i am using PYTHON 2.7'

v0='i am using PYTHON 2.7 version'; v0[11:21]; --> 'PYTHON 2.7'

v0='i am using PYTHON 2.7 version'; v0[11:-8]; --> 'PYTHON 2.7'

replace('','')

v0='i am using PYTHON 2.7 v'; v0.replace('PYTHON','PERL').replace('2.7','5.0');

--> 'i am using PERL 5.0 v'

split('')

v0='i am using PYTHON 2.7 version'; v1=v0.split(' '); print(v1); --> ['i', 'am', 'using', 'PYTHON', '2.7', 'version']

**variables**

int

v0=5;

float

v0=5.3;

str

v0="abc";

tuple

v0=(5,6);

list

v0=[5,6];

set

v0={5,6};

dict

v0={5:6};

type()

v0=5; type(v0); --> <type 'int'>

tuple()

v0=[5,6]; tuple(v0); --> (5,6)

list()

v0=(5,6); list(v0); --> [5,6]

**arrays**

nested arrays

v0=[5,6,7,8.2,3.14,('python','perl','ruby',[2.7,5.0],'js'),'asp',1024,'php'];

v0[2] --> 7

v0[-2] --> 1024

v0[5] --> ('python', 'perl', 'ruby', [2.7, 5.0], 'js')

v0[5][1] --> 'perl'

v0[5][3] --> [2.7, 5.0]

v0[5][3][0] --> 2.7

v0.index('asp') --> 6

modify an element of an array

v0=[5,6,7,8.2,3.14,('python','perl','ruby',[2.7,5.0],'js'),'asp',1024,'php'];

v0[2]=100; print(v0);

--> [5, 6, 100, 8.2, 3.14, ('python', 'perl', 'ruby', [2.7, 5.0], 'js'), 'asp', 1024, 'php']

v0[5]='css'; print(v0);

--> [5, 6, 100, 8.2, 3.14, 'css', 'asp', 1024, 'php']

v0={'python':2.7,'perl':5.0,'ruby':2.5,'php':7.0,'css':3.0};

v0['python']=3.7; print(v0);

--> {'python': 3.7, 'php': 7.0, 'ruby': 2.5, 'css': 3.0, 'perl': 5.0}

add element to an array

v0=[5,6,7,8.2,3.14,('python','perl','ruby',[2.7,5.0],'js'),'asp',1024,'php'];

v0.append(9); print(v0);

--> [5, 6, 7, 8.2, 3.14, ('python', 'perl', 'ruby', [2.7, 5.0], 'js'), 'asp', 1024, 'php', 9]

v0.insert(3,'html'); print(v0);

--> [5, 6, 7, 'html', 8.2, 3.14, ('python', 'perl', 'ruby', [2.7, 5.0], 'js'), 'asp', 1024, 'php', 9]

v0={'python','perl','ruby','javascript','css'};

v1={'perl','asp','php','css'};

v0.add('html'); print(v0);

--> set(['python', 'javascript', 'perl', 'html', 'ruby', 'css'])

v0.update(v1); print(v0);

--> set(['asp', 'python', 'javascript', 'perl', 'html', 'php', 'ruby', 'css'])

v0={'python':2.7,'perl':5.0,'ruby':2.5,'php':7.0,'css':3.0};

v0['html']=4.1; print(v0);

--> {'python': 2.7, 'perl': 5.0, 'html': 4.1, 'php': 7.0, 'ruby': 2.5, 'css': 3.0}

remove element from an array

v0=[5,6,7,8.2,3.14,('python','perl','ruby',[2.7,5.0],'js'),'asp',1024,'php'];

v0.remove('asp'); print(v0);

--> [5, 6, 7, 8.2, 3.14, ('python', 'perl', 'ruby', [2.7, 5.0], 'js'), 1024, 'php']

del v0[3]; print(v0);

--> [5, 6, 7, 3.14, ('python', 'perl', 'ruby', [2.7, 5.0], 'js'), 1024, 'php']

v0={'python','perl','ruby','javascript','css'};

v0.remove('perl'); print(v0);

--> set(['python', 'javascript', 'ruby', 'css'])

v0={'python':2.7,'perl':5.0,'ruby':2.5,'php':7.0,'css':3.0};

del v0['perl']; print(v0);

--> {'python': 2.7, 'php': 7.0, 'ruby': 2.5, 'css': 3.0}

sum of elements of an array

v0=[5,6,7,8.2,3.14,2.7,5.0,1024];

print(sum(v0)); --> 1061.04

minimum element from an array

v0=[5,6,7,8.2,3.14,2.7,5.0,1024];

print(min(v0)); --> 2.7

maximum element from an array

v0=[5,6,7,8.2,3.14,2.7,5.0,1024];

print(max(v0)); --> 1024

sorting elements of an array

v0=[5,6,7,8.2,3.14,2.7,5.0,1024];

print(sorted(v0, reverse=False)); --> [2.7, 3.14, 5, 5.0, 6, 7, 8.2, 1024]

print(sorted(v0, reverse=True)); --> [1024, 8.2, 7, 6, 5, 5.0, 3.14, 2.7]

**CHAPTER III - BASIC OPERATIONS**

**inquery**

if - elif - else

v0=5; v1=12;

if ((v0<=5 and (v0+v1)>25) or (v1>7 and (v1-v0)<2)) :

print('condition 1 was provided...');

elif ((v0==5 and (v0+v1)>15) or ((v0\*\*v1)<100 and (v1/v0)<2)) :

print('condition 2 was provided...');

elif ((v0//v1)>(v0%v1)) :

print('condition 3 was provided...');

else :

print('condition 4 was provided...');

**loops**

range()

range(10); --> [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]

range(5,15); --> [5, 6, 7, 8, 9, 10, 11, 12, 13, 14]

range(25,55,5); --> [25, 30, 35, 40, 45, 50]

for

v0=['raspberry','blueberry','blackberry','strawberry','gooseberry','berry'];

for i in v0 :

print(i);

for i in range(5) :

print('hello world');

print(i%2);

while

v0=0;

while (v0<5) :

print(v0\*\*v0);

v0+=1;

continue

for i in range(8) :

if (i==4) : continue;

print(i);

break

v0=0;

while True :

if (v0==8) :break;

print(v0);

v0+=2;

**try - except**

while True :

v0=input('v0 = '); v1=input('v1 = ');

try :

print(float(v0)/float(v1)); break;

except :

print('input integers, please!\n');

**CHAPTER VI - FIRST STEPS OUTWARD**

**functions**

def

def mysum(v0) :

v1=0;

for i in v0 :

v1+=i;

print(v1);

mysum([4,8,12]);

def mydiv(v0) :

for i in v0 :

if (i%5==0) :

print(i);

mydiv([27,36,15,23,47,55,82]);

def fibonacci(v0) :

v1=[1,1];

while True :

v1.append(v1[-1] + v1[-2]);

if (len(v1)==v0) : break;

print(v1);

fibonacci(10);

return()

def myaave(v0) :

return(float(sum(v0))/len(v0));

print(myaave([4,8,12]));

def mygave(v0) :

v1=1;

for i in v0 :

v1\*=i;

return(v1\*\*(1.0/len(v0)));

print(mygave([4,8,12]));

def myhave(v0) :

v1=0;

for i in v0 :

v1+=1.0/i;

return(len(v0)/v1);

print(myhave([4,8,12]));

def mymin(v0) :

v1=v0[0];

for i in range(len(v0)) :

if (v0[i]<v1) :

v1=v0[i];

return(v1);

mymin([7,8,3,2,27,36]);

def mymax(v0) :

v1=v0[0];

for i in v0 :

if (i>v1) :

v1=i;

return(v1);

mymax([7,8,3,2,27,36]);

def mymin2max(v0) :

v1=v0;

v0=tuple(v0);

v2=0;

for i in range(len(v1)) :

v1[i]=0;

for i in v0 :

for j in v0 :

if (i>j) : v2+=1;

v1[v2]=i; v2=0;

return(v1);

mymin2max([23,2,36,45,5,15,25]);

def mymax2min(v0) :

v1=[];

for i in range(len(v0)) :

v2=v0[0];

for j in v0 :

if (j>v2) : v2=j;

v0.remove(v2);

v1.append(v2);

return(v1);

mymax2min([23,2,36,45,5,15,25]);

exec()

def mymin(v0) :

exec("v1=v0[0];" + "\n" + "for cntr in v0 : v1=cntr if cntr<v1 else v1");

return v1;

mymin([7,8,3,2,27,36]);

def mymax(v0) :

exec("v1=v0[0];" + "\n" + "for cntr in v0 : v1=cntr if cntr>v1 else v1");

return v1;

mymax([7,8,3,2,27,36]);

def mymin2max(v0) :

exec("v1=list(v0);" + "\n" + "for cntr1 in range(len(v0)) :" + "\n\t" + "v2=0;" + "\n\t" + "for cntr2 in range(len(v0)) : v2+=1 if v0[cntr1]>v0[cntr2] else 0" + "\n\t" + "v1[v2]=v0[cntr1];");

return v1;

mymin2max([23,2,36,45,5,15,25]);

def mymax2min(v0) :

exec("v1=list(v0);" + "\n" + "for cntr1 in range(len(v0)) :" + "\n\t" + "v2=0;" + "\n\t" + "for cntr2 in range(len(v0)) : v2+=1 if v0[cntr1]<v0[cntr2] else 0" + "\n\t" + "v1[v2]=v0[cntr1];");

return v1;

mymax2min([23,2,36,45,5,15,25]);

recursion

def myrecursion(v0) :

print(v0);

v0+=1;

if (v0<10) : myrecursion(v0);

myrecursion(0);

**CHAPTER V - ADVANCED OPERATIONS**

**randomize**

random()

import random; random.random(); --> 0.2680477398447698

randrange()

import random; random.randrange(50); --> 38

import random; random.randrange(15,50); --> 22

import random; random.randrange(15,50,5); --> 35

triangular()

import random; random.triangular(30,90,75); --> 73.58478994035025

choice()

import random; random.choice([23,2,36,45,5,15,25]); --> 36

sample()

import random; random.sample([23,2,36,45,5,15,25],3); --> [5, 2, 45]

shuffle()

import random; v0=[23,2,36,45,5,15,25]; random.shuffle(v0); print(v0); --> [45, 36, 5, 23, 15, 25, 2]

**date - time**

format date and time

import datetime;

datetime.datetime.now().strftime("%d.%m.%Y %H:%M:%S");

--> '21.08.2018 01:22:43'

timedelta()

import datetime;

(datetime.datetime.now()+datetime.timedelta(days=1, hours=-2, minutes=3)).strftime("%d.%m.%Y %H:%M:%S");

--> '21.08.2018 23:27:16'

sleep()

import time;

for i in range(10) : print(i); time.sleep(0.5);

**modules**

dir()

import datetime;

dir(datetime);

--> ['MAXYEAR', 'MINYEAR', '\_\_doc\_\_', '\_\_name\_\_', '\_\_package\_\_', 'date', 'datetime', 'datetime\_CAPI', 'time', 'timedelta', 'tzinfo']

generate a new module

cntn="def myaave(v0) : v1=round(sum(v0)/len(v0),3); return v1;\ndef mygave(v0) :\n\tv1=1;\n\tfor cntr in v0 :\n\t\tv1\*=cntr;\n\tv1=round(v1\*\*(1.0/len(v0)),3);\n\treturn v1;\ndef myhave(v0) :\n\tv1=0;\n\tfor cntr in v0 :\n\t\tv1+=1.0/cntr;\n\tv1=round(len(v0)/v1,3);\n\treturn v1;\n"; import os, sys; f0=open('C:\\python27\\mymodule.py','w+'); f0.write(cntn); f0.close();

import mymodule;

mymodule.myaave([4,8,12]); --> 8.0

**CHAPTER VI - FIRST STEPS OUTWARD**

**file management**

new folder and file

import os, sys; os.system('md C:\\Python27\\FMTest');

f0=open('C:\\Python27\\FMTest\\f0.txt','w'); f0.write('row 0\nrow 1\nrow 2\nrow 3\nrow 4'); f0.close();

read from a file

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.read(); f0.close(); print(v0);

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.readline(); v0=v0 + f0.readline(); f0.close(); print(v0);

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.readlines(); f0.close(); print(v0[2:4]);

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); f0.seek(7); v0=f0.read(5); f0.close(); print(v0);

append to a file

f0=open('C:\\Python27\\FMTest\\f0.txt','a'); f0.write('\nrow 5'); f0.close(); f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.read(); f0.close(); print(v0);

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.read(); f0.close(); v0='row -1\n' + v0; f0=open('C:\\Python27\\FMTest\\f0.txt','w'); f0.write(v0); f0.close(); f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.read(); f0.close(); print(v0);

f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.readlines(); f0.close(); v0.insert(3,'row 2.5\n'); f0=open('C:\\Python27\\FMTest\\f0.txt','w'); f0.writelines(v0); f0.close(); f0=open('C:\\Python27\\FMTest\\f0.txt','r'); v0=f0.read(); f0.close(); print(v0);

**web operations**

download an image

import urllib; urllib.URLopener().retrieve('https://www.gunnerkrigg.com//comics/00000001.jpg','C:\\Source\\test.jpg');

download a program

import urllib; urllib.URLopener().retrieve('https://www.rarlab.com/rar/winrar-x64-560.exe','C:\\Source\\WinRar5.exe');

download a web page

import os, sys, urllib2; os.system('md C:\\Python27\\WebTest'); f0=open('C:\\Python27\\WebTest\\f0.html','w'); v0=urllib2.urlopen('http://www.gebze.bel.tr/tr/icerikdetay/70/77/tarihce.aspx'); v1=v0.read(); v0.close(); f0.write(v1); f0.close();

get data from a web page

import urllib2; v0=urllib2.urlopen('https://portal-widgets-v3.foreks.com/currency'); v1=v0.read(); v0.close();

print(v1[(v1.index('ABD Dolar')+46):(v1.index('ABD Dolar')+52)] + '\t' + v1[(v1.index('ABD Dolar')+85):(v1.index('ABD Dolar')+91)]);

generate a web page and get distributed data block from the web page

import urllib2, bs4;

f0=open('C:\\inetpub\\wwwroot\\Soup.html','w');

f0.write("<html>\n");

f0.write("<head>\n");

f0.write("<title>Spectre Robotics</title>\n");

f0.write("<style type='text/css'>\n");

f0.write("#tr00 { height: 40px; background-color: #B40431; font-weight: bold; color: #F6CED8; }\n");

f0.write("#tr01 { height: 25px; background-color: #81BEF7; font-weight: normal; color: #0431B4; }\n");

f0.write("#tr02 { height: 25px; background-color: #0431B4; font-weight: normal; color: #81BEF7; }\n");

f0.write("#td01 { width: 30px; }\n");

f0.write("#td02 { width: 335px; }\n");

f0.write("#td03 { width: 100px; }\n");

f0.write("#td04 { width: 200px; }\n");

f0.write("</style>\n");

f0.write("</head>\n");

f0.write("<body>\n");

f0.write("<table id='t0' align=center border=1>\n");

f0.write("<tr id='tr00' align=center><td id='td01'>#</td><td id='td02' align=left>&nbsp Name Surname</td><td id='td03'>City</td><td id='td04' style='width:217px'>Country</td></tr>\n");

f0.write("<tr id='tr02' align=center><td id='td01'>2</td><td id='td02' align=left>&nbsp Ibrahim Avci</td><td id='td03'>Kansas</td><td id='td04'>Turkey</td></tr>\n");

f0.write("<tr id='tr01' align=center><td id='td01'>3</td><td id='td02' align=left>&nbsp Furkan Avci</td><td id='td03'>Boston</td><td id='td04'>USA</td></tr>\n");

f0.write("<tr id='tr02' align=center><td id='td01'>4</td><td id='td02' align=left>&nbsp Katsuhiko Ogata</td><td id='td03'>Tokyo</td><td id='td04'>Japan</td></tr>\n");

f0.write("<tr id='tr01' align=center><td id='td01'>5</td><td id='td02' align=left>&nbsp Mujid Kazimi</td><td id='td03'>Amman</td><td id='td04'>Jordan</td></tr>\n");

f0.write("<tr id='tr02' align=center><td id='td01'>6</td><td id='td02' align=left>&nbsp Richard Sonntag</td><td id='td03'>Iowa</td><td id='td04'>USA</td></tr>\n");

f0.write("</table>\n");

f0.write("</body>\n");

f0.write("</html>\n");

f0.close();

v0=urllib2.urlopen('http://localhost/soup.html'); v1=v0.read().replace('\n','').replace('\r','').replace('\t',''); v0.close();

v2=bs4.BeautifulSoup(v1,'html.parser').find\_all('table',{'id':'t0'});

v2=v2[0].contents;

v4=[[],[],[]];

for v3 in v2 :

v4[0].append(v3.find\_all('td',{'id':'td02'})[0].text[2:]);

v4[1].append(v3.find\_all('td',{'id':'td03'})[0].text);

v4[2].append(v3.find\_all('td',{'id':'td04'})[0].text);

for i in range(len(v4[0])) : print(v4[0][i] + '\t\t' + v4[1][i] + '\t\t' + v4[2][i]);

get distributed data block from a web page

import os, sys, urllib2, bs4; os.system('md C:\\Python27\\WebTest'); f0=open('C:\\Python27\\WebTest\\f0.html','w');

v0=urllib2.urlopen('http://www.imdb.com/chart/top'); v1=v0.read(); v0.close();

v2=bs4.BeautifulSoup(v1,'html.parser').find\_all('table',{'data-caller-name':'chart-top250movie'});

v2=v2[0].contents[len(v2[0].contents)-2]; v2=v2.find\_all('tr'); v4=[];

for v3 in v2 : v4.append(v3.find\_all('td',{'class':'titleColumn'})[0].text.replace('\n','') + '\n');

v5=''; v5=v5.join(v4); f0.write(v5.encode('utf-8')); f0.close();

operate mouse and keyboard with code

import pyautogui, time;

pyautogui.hotkey('win','7');

pyautogui.hotkey('ctrl','t');

pyautogui.moveTo(150,50,1); pyautogui.click(); time.sleep(2);

pyautogui.moveTo(pyautogui.size()[0]/2,420,1); pyautogui.click();

pyautogui.typewrite('spectre robotics', interval=0.05);

pyautogui.press('enter'); time.sleep(2);

pyautogui.moveTo(264, 267,1); pyautogui.click(); time.sleep(10);

pyautogui.scroll(-800); time.sleep(5);

pyautogui.screenshot('C:\\Source\\Capture.png',region=(745,200,760,550)); time.sleep(1);

pyautogui.scroll(-1200); time.sleep(5);

v0=pyautogui.locateOnScreen('C:\\Source\\Picture\\Button.png', grayscale=True);

pyautogui.click(int(v0[0]+v0[2]/2),int(v0[1]+v0[3]/2),2); time.sleep(2);

pyautogui.click(pyautogui.size()[0]/2,328,1); time.sleep(2);

pyautogui.typewrite('Furkan AVCI', interval=0.05);

pyautogui.press('tab'); time.sleep(1);

pyautogui.typewrite('7', interval=0.05);

pyautogui.press('tab'); time.sleep(1);

pyautogui.typewrite('Ibrahim', interval=0.05);

pyautogui.press('tab'); time.sleep(1);

pyautogui.typewrite('0 555 666 77 88', interval=0.05);

v0=pyautogui.locateOnScreen('C:\\Source\\Picture\\Combo.png', grayscale=True);

pyautogui.click(int(v0[0]+v0[2]/2),int(v0[1]+v0[3]/2),1); time.sleep(1);

v0=pyautogui.locateOnScreen('C:\\Source\\Picture\\Option.png', grayscale=True);

pyautogui.click(int(v0[0]+v0[2]/2),int(v0[1]+v0[3]/2),2); time.sleep(1);

pyautogui.press('tab'); time.sleep(1);

pyautogui.press('enter'); time.sleep(5);

pyautogui.hotkey('ctrl','w');

operate web browser with code

from selenium import webdriver;

from selenium.webdriver.common.keys import Keys;

import time;

d0=webdriver.Edge('C:\\Source\\Selenium.exe');

d0.implicitly\_wait(10);

d0.maximize\_window();

d0.get('https://www.google.com');

e0=d0.find\_element\_by\_name('q');

e0.send\_keys('spectre robotics');

e0.send\_keys(Keys.RETURN);

e0=d0.find\_element\_by\_link\_text('Spectre Robotics');

e0.click(); time.sleep(10);

d0.execute\_script("window.scrollTo(0,1000)"); time.sleep(5);

d0.get\_screenshot\_as\_file('C:\\Source\\Capture.png'); time.sleep(1);

e0=d0.find\_element\_by\_class\_name('probootstrap-image probootstrap-animate fadeInUp probootstrap-animated');

print('location of picture\t x : ' + str(int(e0.location['x'])) + '\t y : ' + str(int(e0.location['y'])));

print('size of picture\t width : ' + str(e0.size['width']) + '\t height : ' + str(e0.size['height']));

d0.execute\_script("window.scrollTo(0,2300)"); time.sleep(5);

e0=d0.find\_element\_by\_partial\_link\_text('Online');

e0.click(); time.sleep(2);

e0=d0.find\_element\_by\_name('v0'); e0.send\_keys('Furkan AVCI'); time.sleep(1);

e0=d0.find\_element\_by\_name('v1'); e0.send\_keys('7'); time.sleep(1);

e0=d0.find\_element\_by\_name('v2'); e0.send\_keys('Ibrahim'); time.sleep(1);

e0=d0.find\_element\_by\_name('v3'); e0.send\_keys('0 555 666 77 88'); time.sleep(1);

e0=d0.find\_element\_by\_name('v4'); e0.send\_keys(Keys.ARROW\_DOWN,Keys.ARROW\_DOWN,Keys.ARROW\_DOWN,Keys.ARROW\_DOWN,Keys.ARROW\_DOWN); time.sleep(1);

e0=d0.find\_element\_by\_css\_selector("input[type='submit']"); e0.send\_keys(Keys.RETURN); time.sleep(5);

d0.quit();

**CHAPTER VII - KEEP AND SHARE DATA**

**spreadsheet**

connect to excel file

import xlrd;

x0=xlrd.open\_workbook('C:\\Source\\Firm.xlsx');

s0=x0.sheet\_by\_name('Customer');

s1=x0.sheet\_by\_name('Product');

v0=[]; v1='';

for j in range(s0.nrows) :

v0.append([]);

for i in range(s0.ncols) :

v0[j].append(s0.cell(j,i).value);

for j in range(s0.nrows) :

for i in range(s0.ncols) :

v1+=str(v0[j][i]) + '\t';

v1+='\n';

print(v1);

excel operations

import xlrd, xlwt;

x0=xlwt.Workbook();

s0=x0.add\_sheet('Customer');

s0.write(0,0,'Id'); s0.write(0,1,'Name'); s0.write(0,2,'Surname'); s0.write(0,3,'City'); s0.write(0,4,'Country');

s0.write(1,0,'1'); s0.write(1,1,'Ibrahim'); s0.write(1,2,'Avci'); s0.write(1,3,'Istanbul'); s0.write(1,4,'Turkey');

s0.write(2,0,'2'); s0.write(2,1,'Furkan'); s0.write(2,2,'Avci'); s0.write(2,3,'Boston'); s0.write(2,4,'USA');

s0.write(3,0,'3'); s0.write(3,1,'Katsuhiko'); s0.write(3,2,'Ogata'); s0.write(3,3,'Tokyo'); s0.write(3,4,'Japan');

s0.write(4,0,'4'); s0.write(4,1,'Mujic'); s0.write(4,2,'Kazimi'); s0.write(4,3,'Amman'); s0.write(4,4,'Jordan');

s0.write(5,0,'5'); s0.write(5,1,'Richard'); s0.write(5,2,'Sonntag'); s0.write(5,3,'Illinois'); s0.write(5,4,'USA');

x0.save('C:\\Source\\Firm2.xls');

x1=xlrd.open\_workbook('C:\\Source\\Firm2.xls');

s1=x1.sheet\_by\_name('Customer');

v0=[]; v1='';

for j in range(s1.nrows) :

v0.append([]);

for i in range(s1.ncols) :

v0[j].append(s1.cell(j,i).value);

for j in range(s1.nrows) :

for i in range(s1.ncols) :

v1+=str(v0[j][i]) + '\t';

v1+='\n';

print(v1);

**xml**

connect to xml file

import xml.etree.ElementTree;

x0=xml.etree.ElementTree.parse('C:\\Source\\Firm.xml');

v0=x0.getroot();

v1={v0.tag:{}}

for i in range(len(v0)) :

v1[v0.tag][v0[i].tag + str(i+1)]={};

for j in range(len(v0[i])) :

v1[v0.tag][v0[i].tag + str(i+1)][v0[i][j].tag]=v0[i][j].text;

for i in range(len(v1['bookstore'])) :

print(v1['bookstore'][v1['bookstore'].keys()[i]]['title'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['price'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['author'] + "\t" + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['year']);

xml operations

import xml.etree.ElementTree;

print('original version :\n')

x0=xml.etree.ElementTree.parse('C:\\Source\\Firm.xml');

v0=x0.getroot();

v1={v0.tag:{}}

for i in range(len(v0)) :

v1[v0.tag][v0[i].tag + str(i+1)]={};

for j in range(len(v0[i])) :

v1[v0.tag][v0[i].tag + str(i+1)][v0[i][j].tag]=v0[i][j].text;

for i in range(len(v1['bookstore'])) :

print(v1['bookstore'][v1['bookstore'].keys()[i]]['title'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['price'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['author'] + "\t" + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['year']);

v0[1][0].text='Kucuk Emrah';

v0[1][3].text='19.99';

v0[1][1].text='Dan Brown';

v0[1][2].text='1992';

del v0[2];

e0=xml.etree.ElementTree.SubElement(v0, 'book');

e0.attrib['category']='programming';

e1=xml.etree.ElementTree.SubElement(v0[len(v0)-1], 'title');

e1.attrib['lang']='en';

e1.text='Python v2.7';

e2=xml.etree.ElementTree.SubElement(v0[len(v0)-1], 'author');

e2.text='Ibrahim Avci';

e3=xml.etree.ElementTree.SubElement(v0[len(v0)-1], 'year');

e3.text='2018';

e4=xml.etree.ElementTree.SubElement(v0[len(v0)-1], 'price');

e4.text='48.00';

x0.write('C:\\Source\\FirmNew.xml');

x0=xml.etree.ElementTree.parse('C:\\Source\\FirmNew.xml');

v0=x0.getroot();

v1={v0.tag:{}}

print('\nupdated version :\n')

for i in range(len(v0)) :

v1[v0.tag][v0[i].tag + str(i+1)]={};

for j in range(len(v0[i])) :

v1[v0.tag][v0[i].tag + str(i+1)][v0[i][j].tag]=v0[i][j].text;

for i in range(len(v1['bookstore'])) :

print(v1['bookstore'][v1['bookstore'].keys()[i]]['title'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['price'] + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['author'] + "\t" + "\t" + v1['bookstore'][v1['bookstore'].keys()[i]]['year']);

make new xml file

import xml.etree.ElementTree;

re=xml.etree.ElementTree.Element('bookstore');

se0=xml.etree.ElementTree.SubElement(re, 'book', category='cooking');

sse0=xml.etree.ElementTree.SubElement(se0, 'title', lang='en').text='Now Italian';

sse1=xml.etree.ElementTree.SubElement(se0, 'author').text='Giada Lauren';

sse2=xml.etree.ElementTree.SubElement(se0, 'year').text='2005';

sse3=xml.etree.ElementTree.SubElement(se0, 'price').text='30.00';

se1=xml.etree.ElementTree.SubElement(re, 'book', category='children');

sse0=xml.etree.ElementTree.SubElement(se1, 'title', lang='en').text='Harry Potter';

sse1=xml.etree.ElementTree.SubElement(se1, 'author').text='J K. Rowling';

sse2=xml.etree.ElementTree.SubElement(se1, 'year').text='2005';

sse3=xml.etree.ElementTree.SubElement(se1, 'price').text='29.99';

se2=xml.etree.ElementTree.SubElement(re, 'book', category='web');

sse0=xml.etree.ElementTree.SubElement(se2, 'title', lang='en').text='Html and Css';

sse1=xml.etree.ElementTree.SubElement(se2, 'author').text='James McGovern';

sse2=xml.etree.ElementTree.SubElement(se2, 'author').text='Per Bothner';

sse3=xml.etree.ElementTree.SubElement(se2, 'author').text='Kurt Cagle';

sse4=xml.etree.ElementTree.SubElement(se2, 'author').text='James Linn';

sse5=xml.etree.ElementTree.SubElement(se2, 'author').text='Vaidya Nagara';

sse6=xml.etree.ElementTree.SubElement(se2, 'year').text='2003';

sse7=xml.etree.ElementTree.SubElement(se2, 'price').text='49.99';

se3=xml.etree.ElementTree.SubElement(re, 'book', category='web', cover='paperback');

sse0=xml.etree.ElementTree.SubElement(se3, 'title', lang='en').text='Learning XML';

sse1=xml.etree.ElementTree.SubElement(se3, 'author').text='Erik T. Ray';

sse2=xml.etree.ElementTree.SubElement(se3, 'year').text='2003';

sse3=xml.etree.ElementTree.SubElement(se3, 'price').text='39.95';

tree=xml.etree.ElementTree.ElementTree(re);

tree.write('C:\\Source\\FirmNew.xml');

**database**

connect to sqlite database

import sqlite3;

d0=sqlite3.connect('C:\\Source\\Staff.db');

v0=d0.cursor();

v0.execute('create table Staff (sid integer primary key autoincrement not null unique, stffpr01 varchar(50), stffpr02 varchar(50), stffpr03 varchar(50))');

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.901', 'Ibrahim', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.902', 'Furkan', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.903', 'Pirate', 'Personnel')"); d0.commit();

v0.execute("update Staff set stffpr02='Said', stffpr03='Bey' where sid=2"); d0.commit();

v0.execute("delete from Staff where stffpr02='Pirate'"); d0.commit();

v1=v0.execute('select \* from Staff').fetchall();

for v2 in v1 : print(str(v2[0]) + '\t' + v2[1] + '\t' + v2[2] + '\t' + v2[3]);

d0.close();

connect to access database

import pypyodbc;

d0=pypyodbc.win\_create\_mdb('C:\\Source\\Staff.mdb');

d0=pypyodbc.connect('driver={microsoft access driver (\*.mdb, \*.accdb)}; dbq=C:\\Source\\Staff.mdb;');

v0=d0.cursor();

v0.execute('create table Staff (sid autoincrement primary key, stffpr01 varchar(50), stffpr02 varchar(50), stffpr03 varchar(50))');

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.901', 'Ibrahim', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.902', 'Furkan', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.903', 'Pirate', 'Personnel')"); d0.commit();

v0.execute("update Staff set stffpr02='Said', stffpr03='Bey' where sid=2"); d0.commit();

v0.execute("delete from Staff where stffpr02='Pirate'"); d0.commit();

v1=v0.execute('select \* from Staff').fetchall();

for v2 in v1 : print(str(v2[0]) + '\t' + v2[1] + '\t' + v2[2] + '\t' + v2[3]);

d0.close();

connect to mssql database

import sqlite3;

d0=pypyodbc.connect('driver={sql server}; server=Spectre-D0; database=Exp; trusted\_connection=yes');

v0=d0.cursor();

v0.execute('create table Staff (sid integer primary key autoincrement not null unique, stffpr01 varchar(50), stffpr02 varchar(50), stffpr03 varchar(50))');

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.901', 'Ibrahim', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.902', 'Furkan', 'Avci')"); d0.commit();

v0.execute("insert into Staff (stffpr01, stffpr02, stffpr03) values ('12.345.678.903', 'Pirate', 'Personnel')"); d0.commit();

v0.execute("update Staff set stffpr02='Said', stffpr03='Bey' where sid=2"); d0.commit();

v0.execute("delete from Staff where stffpr02='Pirate'"); d0.commit();

v1=v0.execute('select \* from Staff').fetchall();

for v2 in v1 : print(str(v2[0]) + '\t' + v2[1] + '\t' + v2[2] + '\t' + v2[3]);

d0.close();

**CHAPTER VIII - TOWARDS AUTOMATION**

**object oriented programming**

class student :

name=''; surname=''; age=0; faculty=''; department=''; term=0;

def \_\_init\_\_(self,name,surname,age,faculty,department,term) :

self.name=name; self.surname=surname; self.age=age; self.faculty=faculty; self.department=department; self.term=term;

def show\_student (self) :

print('name\t\t: ' + self.name + '\nsurname\t\t: ' + self.surname + '\nage\t\t: ' + str(self.age) + '\nfaculty\t\t: ' + self.faculty + '\ndepartment\t: ' + self.department + '\nterm\t\t: ' + str(self.term));

s0=student('Ibrahim', 'AVCI', 20, 'Engineering', 'Nuclear Energy', 3);

del s0.age; s0.age=22;

s0.show\_student();

del s0;