DAY 26

LIST COMPREHENSION:

new\_list = [new\_item for item in list]

LIST COMPREHENSION:

Numbers = [1,2,3]

New\_list = [n+1 for n in numbers]

GENERAL METHOD:

Numbers = [1,2,3]

New\_list = []

For n in numbers:

Add\_1 = n+1

New\_list.append(add\_1)

1. EXAMPLE:

name = "angela"

new\_name\_list = [letter for letter in name]

print(new\_name\_list)

output:

['a', 'n', 'g', 'e', 'l', 'a']

1. EXAMPLE:

range\_list = [n\*2 for n in range(1,5)]

print(range\_list)

OUTPUT:

[2, 4, 6, 8]

CONDITIONAL LIST COMPREHENSION:

New\_list = [new\_item for item in list if test]

1. EXAMPLE:

names =["alex","beth","caroline","eleanor"]

short\_list = [name for name in names if len(name)==4]

print(short\_list)

OUTPUT:

['alex', 'beth']

1. EXAMPLE:

longnames = ["alex","beth","dave","eleanor","feddie","caroline"]

uppercased\_list = [name.upper() for name in names if len(name)>5]

print(uppercased\_list)

OUTPUT:

['CAROLINE', 'ELEANOR']

1. EXAMPLE Common numbers from 2 files:

with open("file1.txt") as file1:

files1 = file1.readlines()

with open("file2.txt") as file2:

files2 = file2.readlines()

result =[int(num) for num in files1 if num in files2]

print(result)

DICTIONARY COMPREHENSION:

new\_dict = {new\_key : new\_value for item in list}

new\_dict = {new\_key: new\_value for (key, value) in dict.items()}

EXAMPLE:

names = ['anne',"beth","caroline","dave","evelyne","john"]  
import random  
score = {student : random.randint(1,100) for student in names}  
print(score)

OUTPUT:

{'anne': 68, 'beth': 29, 'caroline': 12, 'dave': 83, 'evelyne': 80, 'john': 56}

CONDITIONAL DICTIONARY COMPREHENSION:

new\_dict = {new\_key: new\_value for (key, value) in dict.items() if test}

EXAMPLE:

names = ['anne',"beth","caroline","dave","evelyne","john"]  
import random  
score = {student : random.randint(1,100) for student in names}  
passed\_students = {student:value for (student,value) in score.items() if value >= 60 }  
print(passed\_students)

OUTPUT:

{'anne': 68, 'dave': 83, 'evelyne': 80, }

PANDAS ITERATION:

EXAMPLE:

import pandas  
stude\_dict = {  
 "student":["Angela","pavithra","hema"],  
 "score":[80,90,97]  
}  
student\_data\_frame = pandas.DataFrame(stude\_dict)  
for (index,rows) in student\_data\_frame.iterrows():  
 print(rows)

OUTPUT:

student angela

score 80

Name: 0, dtype: object

student pavithra

score 90

Name: 1, dtype: object

student hema

score 97

Name: 2, dtype: object

EXAMPLE:

for (index,rows) in student\_data\_frame.iterrows():  
 print(rows.student)

OUTPUT:

angela

pavithra

hema