```
import pandas as pd
import openpyxl
from openpyxl.chart import BarChart,LineChart,Series,Reference
```

import datetime from time import sleep

import smtplib from email.mime.text import MIMEText from email.mime.multipart import MIMEMultipart from email.mime.base import MIMEBase from email import encoders

class color:

BOLD = '\033[1m' UNDERLINE = '\033[4m'

 $RED = '\033[91m']$

BLUE = $'\033[94m']$

 $GREEN = '\033[92m']$

PURPLE = '\033[95m'

 $CYAN = '\033[96m']$

DARKCYAN = $'\033[36m']$

 $YELLOW = '\033[93m']$

 $HEADER = '\033[95m']$

OKBLUE = $'\033[94m']$

 $OKCYAN = '\033[96m']$

 $OKGREEN = '\setminus 033[92m']$

WARNING = $'\033[93m'$

 $FAIL = '\033[91m']$

 $ENDC = '\033[0m']$

from openpyxl.styles import Font, Alignment from openpyxl.styles import Border, Side, Color, PatternFill

```
# Font: 맑은고딕 크기15 굵게
font_15 = Font(name='궁서체', size=15, bold=True)
# Alignment; 가로 세로 가운데 정렬
align_center = Alignment(horizontal='center', vertical='center')
align_vcenter = Alignment(vertical='center')
# Border 테두리 지정
border_thin = Border(left=Side(style='thin'), right=Side('thin'), top=Side('thin'),
bottom=Side('thin'))
# PatternFill 셀 색상 지정
fill_orange = PatternFill(patternType='solid', fgColor=Color('FFC000'))
fill_lightgrey = PatternFill(patternType='solid', fgColor=Color('D3D3D3'))
         ===========
                                 이승준
                                              강사의
                                                            설명문
_____
now = datetime.datetime.now()
nowDatetime = now.strftime('%Y-%m-%d')
# -----
# 챠트 그려넣어 이메일 보낼 파일 불러오기
newfile = openpyxl.load_workbook(filename="C:/Users/ahnss/Desktop//cfxahn3.xlsx",
data_only=True)
newsheet = newfile['Sheet1']
# 기존 엑셀 파일 불러오기
file = openpyxl.load_workbook(filename="C:/Users/ahnss/Desktop/2021-11-01 cfx
data.xlsx", data_only=True)
sheet = file['cfx']
#
______
# print(' ---1000')
# 열단위로 1-100개를 읽어서 rowdata에 넣는다.
# 새로운 엑셀 파일에 1-4줄로 적기 위해서 간단한 조작을 한다
# 1번 행에는 날짜를 넣는다 newsheet(2,1)
# 2번 행에는 보상량을 넣는다 newsheet(2,2)
# 3번 행에는 관리비를 넣는다 newsheet(2,3)
# 4번 행에는 실지급량을 넣는다 newsheet(2,4)
# 5번 행에는 실지급량 누계을 넣는다 newsheet(2,5)
# 6번 행에는 월보상량을 넣는다 newsheet(2,6)
```

```
# 2행을 읽어 자료를 4줄로 만든 뒤 그것을 챠트를 그려 보고서를 만든다. cfx
# 화면저장을 A006.png나 111.png로 하여 메일로 보내던지 카톡으로 보낸다.
# 다시 3행에서 같은 작업을 하는 것으로 40행까지 39번을 반복한다.
i = 5
j = 0
# 40개의 서버를 작업한다 col2 (A0006)---> col41(A0045) 40개
for row in sheet.iter_rows(min_row=5, max_row=5, min_col=4, max_col=34):
    #print(' ---1:row ---', row)
    datedata = []
   i = i + 1
   j = -1
    for cell in row:
       j = j + 1
        #print(i, '번 저장소 ', j, ' 값 ===>> ', cell.value)
        datedata.append(cell.value)
    #print(' A0006
                           >>>> 3 datedata : >>>> '.datedata)
    newsheet.cell(1, 1).value = '날짜'
    newsheet.cell(2, 1).value = (datedata[0].strftime('%Y-%m-%d')) # 9/19
    newsheet.cell(3, 1).value = (datedata[1].strftime('%Y-%m-%d'))
    newsheet.cell(4, 1).value = (datedata[2].strftime('%Y-%m-%d'))
    newsheet.cell(5, 1).value = (datedata[3].strftime('%Y-%m-%d'))
    newsheet.cell(6, 1).value = (datedata[4].strftime('%Y-%m-%d'))
    newsheet.cell(7, 1).value = (datedata[5].strftime('%Y-%m-%d'))
    newsheet.cell(8, 1).value = (datedata[6].strftime('%Y-%m-%d'))
    newsheet.cell(9, 1).value = (datedata[7].strftime('%Y-%m-%d'))
    newsheet.cell(10, 1).value = (datedata[8].strftime('%Y-%m-%d'))
    newsheet.cell(11, 1).value = (datedata[9].strftime('%Y-%m-%d'))
    newsheet.cell(12, 1).value = (datedata[10].strftime('%Y-%m-%d'))
    newsheet.cell(13, 1).value = (datedata[11].strftime('%Y-%m-%d'))
    newsheet.cell(14, 1).value = (datedata[12].strftime('%Y-%m-%d'))
    newsheet.cell(15, 1).value = (datedata[13].strftime('%Y-%m-%d'))
    newsheet.cell(16, 1).value = (datedata[14].strftime('%Y-%m-%d'))
    newsheet.cell(17, 1).value = (datedata[15].strftime('%Y-%m-%d'))
    newsheet.cell(18, 1).value = (datedata[16].strftime('%Y-%m-%d'))
    newsheet.cell(19, 1).value = (datedata[17].strftime('%Y-%m-%d'))
    newsheet.cell(20, 1).value = (datedata[18].strftime('%Y-%m-%d'))
    newsheet.cell(21, 1).value = (datedata[19].strftime('%Y-%m-%d'))
    newsheet.cell(22, 1).value = (datedata[20].strftime('%Y-%m-%d'))
    newsheet.cell(23, 1).value = (datedata[21].strftime('%Y-%m-%d'))
```

```
newsheet.cell(24, 1).value = (datedata[22].strftime('%Y-%m-%d'))
    newsheet.cell(25, 1).value = (datedata[23].strftime('%Y-%m-%d'))
    newsheet.cell(26, 1).value = (datedata[24].strftime('%Y-%m-%d'))
    newsheet.cell(27, 1).value = (datedata[25].strftime('%Y-%m-%d'))
    newsheet.cell(28, 1).value = (datedata[26].strftime('%Y-%m-%d'))
    newsheet.cell(29, 1).value = (datedata[27].strftime('%Y-%m-%d'))
    newsheet.cell(30, 1).value = (datedata[28].strftime('%Y-%m-%d'))
    newsheet.cell(31, 1).value = (datedata[29].strftime('%Y-%m-%d'))
    newsheet.cell(32, 1).value = (datedata[30].strftime('%Y-%m-%d'))
allList = []
for row in sheet.iter_rows(min_row=6, max_row=6, min_col=1, max_col=50):
    #print(' ---1:row ---',row)
   rowdata = []
   i = i + 1
   j = -1
   for cell in row:
       j = j + 1
        #print(i,'번 저장소 ',j,' 값 ===>> ', cell.value)
       rowdata.append(cell.value)
   allList.append(rowdata)
    # print(' A0006
                            >>>> 3 a : >>>> '.a)
    # 월누계 자료를 복사해서 붙이므로 앞의 것을 뺴줘야 당일 보상량이 나온다
                          2
                                             4
                                                    5 6
                                                               7
    # 월누계
               1
                                    3
                                                                       8
                                                                              9
       10
               11
                       12
                               13
                                       14
                                               15
                                                       16
                                                               17
                                                                              1
                                                                                  9
                                                                       18
       20
               21
                       2.2.
                               23
                                       24
                                               25
                                                       26
                                                               2.7
                                                                       28
                                                                              2
                                                                                  9
        30
               31
                       32
                                                           33
                                                                 34
                                                                       35
36
   # 저장소
               이름
                       email
                               10/1
                                       10/2
                                               10/3
                                                       10/4
                                                               10/5
                                                                       10/6
                                                                              10/7
        10/8
                              10/11
               10/9
                       10/10
                                       10/12
                                               10/13
                                                       10/14
                                                               10/15
                                                                      10/16
10/17
       10/18
               10/19
                       10/20
                               10/21
                                       10/22
                                               10/23
                                                       10/24
                                                               10/25
                                                                      10/26
10/27
       10/28
               10/29
                       10/30
                               10/31
                                       어제 합 오늘 합 today
   # A0006
               안상구
                       9@han 20.24
                                       37.71
                                               60.38
                                                       83.05
                                                               104.89
                                                                      139.23
186.33 0
                       0
                               0
                                       0
                                               0
                                                       0
                                                                       0
               0
                                                               0
                                                                              0
       0
               0
                       0
                               0
                                       0
                                               0
                                                       0
                                                               0
                                                                       0
                                                                              0
       0
               0
                       0
                               0
                                                       0
```

storageno = rowdata[0] # 원본 엑셀의 80번 열 -- 위치 잘못지정하면 에러

```
name = rowdata[1]
emailid = rowdata[2]
today = round(rowdata[36],2)
cost = round(rowdata[36]*0.2,2)
real = round(rowdata[36]*0.8,2)
```

#cfxahn1.xlsx newsheet

```
# 0
          1
                  2
                        3
#날짜
         일보상
                 실지급
                          월보상계
# 10/1
        20.24
                 16.19
                         20.24
#10/2
        17.47
                 30.17
                         37.71
#10/3
        22.67
                 48.30
                         60.38
```

```
newsheet.cell(1, 2).value = '일보상'
newsheet.cell(2, 2).value = rowdata[3]
newsheet.cell(3, 2).value = rowdata[4]-rowdata[3] if(rowdata[4]>0)
                                                                    else 0
newsheet.cell(4, 2).value = rowdata[5]-rowdata[4] if(rowdata[5]>0)
                                                                    else 0
newsheet.cell(5, 2).value = rowdata[6]-rowdata[5] if(rowdata[6]>0)
                                                                    else 0
newsheet.cell(6, 2).value = rowdata[7]-rowdata[6] if(rowdata[7]>0)
                                                                    else 0
newsheet.cell(7, 2).value = rowdata[8]-rowdata[7] if(rowdata[8]>0)
                                                                    else 0
newsheet.cell(8, 2).value = rowdata[9]-rowdata[8] if(rowdata[9]>0) else 0
newsheet.cell(9, 2).value = rowdata[10]-rowdata[9] if(rowdata[10]>0) else 0
newsheet.cell(10, 2).value = rowdata[11]-rowdata[10] if(rowdata[11]>0)
                                                                         else 0
newsheet.cell(11, 2).value = rowdata[12]-rowdata[11] if(rowdata[12]>0)
                                                                         else 0
newsheet.cell(12, 2).value = rowdata[13]-rowdata[12] if(rowdata[13]>0)
                                                                         else 0
newsheet.cell(13, 2).value = rowdata[14]-rowdata[13] if(rowdata[14]>0)
                                                                         else 0
newsheet.cell(14, 2).value = rowdata[15]-rowdata[14] if(rowdata[15]>0)
                                                                         else 0
newsheet.cell(15, 2).value = rowdata[16]-rowdata[15] if(rowdata[16]>0)
                                                                         else 0
newsheet.cell(16, 2).value = rowdata[17]-rowdata[16] if(rowdata[17]>0)
                                                                         else 0
newsheet.cell(17, 2).value = rowdata[18]-rowdata[17] if(rowdata[18]>0)
                                                                         else 0
newsheet.cell(18, 2).value = rowdata[19]-rowdata[18] if(rowdata[19]>0)
                                                                         else 0
newsheet.cell(19, 2).value = rowdata[20]-rowdata[19] if(rowdata[20]>0)
                                                                         else 0
newsheet.cell(20, 2).value = rowdata[21]-rowdata[20] if(rowdata[21]>0)
                                                                         else 0
newsheet.cell(21, 2).value = rowdata[22]-rowdata[21] if(rowdata[22]>0)
                                                                         else 0
newsheet.cell(22, 2).value = rowdata[23]-rowdata[22] if(rowdata[23]>0)
                                                                         else 0
newsheet.cell(23, 2).value = rowdata[24]-rowdata[23] if(rowdata[24]>0)
                                                                         else 0
newsheet.cell(24, 2).value = rowdata[25]-rowdata[24] if(rowdata[25]>0)
                                                                         else 0
newsheet.cell(25, 2).value = rowdata[26]-rowdata[25] if(rowdata[26]>0)
                                                                         else 0
newsheet.cell(26, 2).value = rowdata[27]-rowdata[26] if(rowdata[27]>0)
                                                                         else 0
newsheet.cell(27, 2).value = rowdata[28]-rowdata[27] if(rowdata[28]>0)
                                                                         else 0
```

```
newsheet.cell(28, 2).value = rowdata[29]-rowdata[28] if(rowdata[29]>0)
newsheet.cell(29, 2).value = rowdata[30]-rowdata[29] if(rowdata[30]>0)
                                                                    else 0
newsheet.cell(30, 2).value = rowdata[31]-rowdata[30] if(rowdata[31]>0)
                                                                    else 0
newsheet.cell(31, 2).value = rowdata[32]-rowdata[31] if(rowdata[32]>0)
                                                                    else 0
newsheet.cell(32, 2).value = rowdata[33]-rowdata[32] if(rowdata[33]>0)
# -----
newsheet.cell(1, 3).value = '실지급'
newsheet.cell(2, 3).value = newsheet.cell(2, 2).value * 0.8
newsheet.cell(3, 3).value = newsheet.cell(3, 2).value * 0.8
newsheet.cell(4, 3).value = newsheet.cell(4, 2).value * 0.8
newsheet.cell(5, 3).value = newsheet.cell(5, 2).value * 0.8
newsheet.cell(6, 3).value = newsheet.cell(6, 2).value * 0.8
newsheet.cell(7, 3).value = newsheet.cell(7, 2).value * 0.8
newsheet.cell(8, 3).value = newsheet.cell(8, 2).value * 0.8
newsheet.cell(9, 3).value = newsheet.cell(9, 2).value * 0.8
newsheet.cell(10, 3).value = newsheet.cell(10, 2).value * 0.8
newsheet.cell(11, 3).value = newsheet.cell(11, 2).value * 0.8
newsheet.cell(12, 3).value = newsheet.cell(12, 2).value * 0.8
newsheet.cell(13, 3).value = newsheet.cell(13, 2).value * 0.8
newsheet.cell(14, 3).value = newsheet.cell(14, 2).value * 0.8
newsheet.cell(15, 3).value = newsheet.cell(15, 2).value * 0.8
newsheet.cell(16, 3).value = newsheet.cell(16, 2).value * 0.8
newsheet.cell(17, 3).value = newsheet.cell(17, 2).value * 0.8
newsheet.cell(18, 3).value = newsheet.cell(18, 2).value * 0.8
newsheet.cell(19, 3).value = newsheet.cell(19, 2).value * 0.8
newsheet.cell(20, 3).value = newsheet.cell(20, 2).value * 0.8
newsheet.cell(21, 3).value = newsheet.cell(21, 2).value * 0.8
newsheet.cell(22, 3).value = newsheet.cell(22, 2).value * 0.8
newsheet.cell(23, 3).value = newsheet.cell(23, 2).value * 0.8
newsheet.cell(24, 3).value = newsheet.cell(24, 2).value * 0.8
newsheet.cell(25, 3).value = newsheet.cell(25, 2).value * 0.8
newsheet.cell(26, 3).value = newsheet.cell(26, 2).value * 0.8
newsheet.cell(27, 3).value = newsheet.cell(27, 2).value * 0.8
newsheet.cell(28, 3).value = newsheet.cell(28, 2).value * 0.8
newsheet.cell(29, 3).value = newsheet.cell(29, 2).value * 0.8
newsheet.cell(30, 3).value = newsheet.cell(30, 2).value * 0.8
newsheet.cell(31, 3).value = newsheet.cell(31, 2).value * 0.8
newsheet.cell(32, 3).value = newsheet.cell(32, 2).value * 0.8
# -----
# ------
```

```
# -----
newsheet.cell(1, 4).value = '날짜'
newsheet.cell(2, 4).value = newsheet.cell(2, 1).value
newsheet.cell(3, 4).value = newsheet.cell(3, 1).value
newsheet.cell(4, 4).value = newsheet.cell(4, 1).value
newsheet.cell(5, 4).value = newsheet.cell(5, 1).value
newsheet.cell(6, 4).value = newsheet.cell(6, 1).value
newsheet.cell(7, 4).value = newsheet.cell(7, 1).value
newsheet.cell(8, 4).value = newsheet.cell(8, 1).value
newsheet.cell(9, 4).value = newsheet.cell(9, 1).value
newsheet.cell(10, 4).value = newsheet.cell(10, 1).value
newsheet.cell(11, 4).value = newsheet.cell(11, 1).value
newsheet.cell(12, 4).value = newsheet.cell(12, 1).value
newsheet.cell(13, 4).value = newsheet.cell(13, 1).value
newsheet.cell(14, 4).value = newsheet.cell(14, 1).value
newsheet.cell(15, 4).value = newsheet.cell(15, 1).value
newsheet.cell(16, 4).value = newsheet.cell(16, 1).value
newsheet.cell(17, 4).value = newsheet.cell(17, 1).value
newsheet.cell(18, 4).value = newsheet.cell(18, 1).value
newsheet.cell(19, 4).value = newsheet.cell(19, 1).value
newsheet.cell(20, 4).value = newsheet.cell(20, 1).value
newsheet.cell(21, 4).value = newsheet.cell(21, 1).value
newsheet.cell(22, 4).value = newsheet.cell(22, 1).value
newsheet.cell(23, 4).value = newsheet.cell(23, 1).value
newsheet.cell(24, 4).value = newsheet.cell(24, 1).value
newsheet.cell(25, 4).value = newsheet.cell(25, 1).value
newsheet.cell(26, 4).value = newsheet.cell(26, 1).value
newsheet.cell(27, 4).value = newsheet.cell(27, 1).value
newsheet.cell(28, 4).value = newsheet.cell(28, 1).value
newsheet.cell(29, 4).value = newsheet.cell(29, 1).value
newsheet.cell(30, 4).value = newsheet.cell(30, 1).value
newsheet.cell(31, 4).value = newsheet.cell(31, 1).value
newsheet.cell(32, 4).value = newsheet.cell(32, 1).value
# -----
# -----
newsheet.cell(1, 5).value = '일보상 누계'
newsheet.cell(2, 5).value = rowdata[3] # 10/1
newsheet.cell(3, 5).value = rowdata[4] # 10/2
```

```
newsheet.cell(4, 5).value = rowdata[5] # 10/3
newsheet.cell(5, 5).value = rowdata[6] # 10/4
newsheet.cell(6, 5).value = rowdata[7]
newsheet.cell(7, 5).value = rowdata[8]
newsheet.cell(8, 5).value = rowdata[9]
newsheet.cell(9, 5).value = rowdata[10]
newsheet.cell(10, 5).value = rowdata[11]
newsheet.cell(11, 5).value = rowdata[12]
newsheet.cell(12, 5).value = rowdata[13]
newsheet.cell(13, 5).value = rowdata[14]
newsheet.cell(14, 5).value = rowdata[15]
newsheet.cell(15, 5).value = rowdata[16]
newsheet.cell(16, 5).value = rowdata[17]
newsheet.cell(17, 5).value = rowdata[18]
newsheet.cell(18, 5).value = rowdata[19]
newsheet.cell(19, 5).value = rowdata[20]
newsheet.cell(20, 5).value = rowdata[21]
newsheet.cell(21, 5).value = rowdata[22]
newsheet.cell(22, 5).value = rowdata[23]
newsheet.cell(23, 5).value = rowdata[24]
newsheet.cell(24, 5).value = rowdata[25]
newsheet.cell(25, 5).value = rowdata[26]
newsheet.cell(26, 5).value = rowdata[27]
newsheet.cell(27, 5).value = rowdata[28]
newsheet.cell(28, 5).value = rowdata[29]
newsheet.cell(29, 5).value = rowdata[30]
newsheet.cell(30, 5).value = rowdata[31]
newsheet.cell(31, 5).value = rowdata[32]
newsheet.cell(32, 5).value = rowdata[33]
# -----
newsheet.cell(1, 6).value = '실지급누계'
newsheet.cell(2, 6).value = rowdata[3] * 0.8
newsheet.cell(3, 6).value = rowdata[4] * 0.8
newsheet.cell(4, 6).value = rowdata[5] * 0.8
newsheet.cell(5, 6).value = rowdata[6] * 0.8
newsheet.cell(6, 6).value = rowdata[7] * 0.8
newsheet.cell(7, 6).value = rowdata[8] * 0.8
newsheet.cell(8, 6).value = rowdata[9] * 0.8
newsheet.cell(9, 6).value = rowdata[10] * 0.8
```

```
newsheet.cell(10, 6).value = rowdata[11] * 0.8
   newsheet.cell(11, 6).value = rowdata[12] * 0.8
   newsheet.cell(12, 6).value = rowdata[13] * 0.8
   newsheet.cell(13, 6).value = rowdata[14] * 0.8
   newsheet.cell(14, 6).value = rowdata[15] * 0.8
   newsheet.cell(15, 6).value = rowdata[16] * 0.8
   newsheet.cell(16, 6).value = rowdata[17] * 0.8
   newsheet.cell(17, 6).value = rowdata[18] * 0.8
   newsheet.cell(18, 6).value = rowdata[19] * 0.8
   newsheet.cell(19, 6).value = rowdata[20] * 0.8
   newsheet.cell(20, 6).value = rowdata[21] * 0.8
   newsheet.cell(21, 6).value = rowdata[22] * 0.8
   newsheet.cell(22, 6).value = rowdata[23] * 0.8
   newsheet.cell(23, 6).value = rowdata[24] * 0.8
   newsheet.cell(24, 6).value = rowdata[25] * 0.8
   newsheet.cell(25, 6).value = rowdata[26] * 0.8
   newsheet.cell(26, 6).value = rowdata[27] * 0.8
   newsheet.cell(27, 6).value = rowdata[28] * 0.8
   newsheet.cell(28, 6).value = rowdata[29] * 0.8
   newsheet.cell(29, 6).value = rowdata[30] * 0.8
   newsheet.cell(30, 6).value = rowdata[31] * 0.8
   newsheet.cell(31, 6).value = rowdata[32] * 0.8
   newsheet.cell(32, 6).value = rowdata[33] * 0.8
   # -----
   newsheet.cell(1, 8).value = (str(nowDatetime) + " " + name + "님! 스토리지 ["
+ storageno + "]에 참여하심을 감사드립니다.")
   print(str(nowDatetime), " ", color.BLUE, color.BOLD, name, " [", storageno, "]
", color.ENDC, emailid, " --- ",
         str(today), " --- ", str(cost)," --- ", str(real))
# -----
# print("-----LineChart 챠트그리기 시작 -----")
# 차트 초기화
# chart = Barchart()
chart = LineChart()
```

```
chart.title = name + " 스토리지 [" + storageno + "] CFX 보상량"
chart.x_axis.title = '2021년 10월'
chart.y_axis.title = 'CFX'
# x축 A2 (10/1) --- A32(10/31) ---> y축 자동으로 표시 수치간격
category = Reference(newsheet, min_col=1, min_row=2, max_row=32)
chart.set_categories(category)
# 범례 B1(일보상 실지급)+ 데이터 영역 B2:C32 --> B1:C32 (일보상-실지급만 표시하기)
chartData = Reference(newsheet, min_col=2, min_row=1, max_col=3,max_row=32)
# 차트에 데이터 바인딩, title_from_data는 범례 값
chart.add_data(chartData, titles_from_data=True)
# -----
# 중간중간 꾸미기 글자키우기 색상 넣기 등
# ------
for row in newsheet['A1:C32']:
  for cell in row:
      cell.alignment = align_vcenter
      cell.fill = fill_lightgrey
for row in newsheet['B2:C32']:
   for cell in row:
      cell.border = border_thin
      cell.number_format = '0.00'
# -----
# 완성된 챠트를 그리기
# -----
newsheet.add_chart(chart, 'H3')
# print("-----BarChart 챠트그리기 시작 -----")
# 차트 초기화
#chart = Barchart()
chart = LineChart()
chart.title = name + " 스토리지 [" + storageno + "] CFX 보상량 누계"
chart.x_axis.title = '2021년 10월'
chart.y_axis.title = 'CFX'
# x축 날짜 D2 (10/1) --- D32(10/31) ---> y축 자동으로 표시 수치간격
category = Reference(newsheet, min_col=4, min_row=2, max_row=32)
chart.set_categories(category)
```

```
# 범례 E1(일보상-실지급누계 ) + 데이터 영역 E2:F32 --> E1:F32
chartData = Reference(newsheet, min_col=5,min_row=1, max_col=6,max_row=32)
# 차트에 데이터 바인딩, title_from_data는 범례 값
chart.add_data(chartData, titles_from_data=True)
# -----
# 중간중간 꾸미기 글자키우기 색상 넣기 등
# ------
for row in newsheet['D1:F32']:
  for cell in row:
     cell.alignment = align_vcenter
     cell.fill = fill_orange
for row in newsheet['E2:F32']:
  for cell in row:
     cell.border = border_thin
     cell.number_format = '0.00'
# -----
# 완성된 챠트를 그리기
# -----
newsheet.add_chart(chart, 'H18')
newfile.save('C:/Users/ahnss/Desktop//cfxahn3.xlsx')
# -----
# print("-----챠트완성하여 cfxahn1.xlsx 저장 -----")
print(" --- /cfxahn3.xlsx 완성, --> 1초 대기후 메일보내기 ---->> ", name, storageno
+ '\n')
sleep(1)
# -----
# -----
# 메일 보내기
# ------
# 세션생성, 로그인
smtpserver = 'smtp.gmail.com:587'
s = smtplib.SMTP('smtp.gmail.com', 587)
s.starttls()
s.login('ahnssi98@gmail.com', 'ivzicifbeckyzwwt')
```

```
# 제목, 본문 작성
msg = MIMEMultipart()
msg['Subject'] = " ** 오늘의 보상량 : "+str(today)
msg.attach(MIMEText(' 스토리지에 참여하심을 감사드립니다. ', 'plain'))
# 파일첨부 (파일 미첨부시 생략가능)
attachment = open('C:/Users/ahnss/Desktop//cfxahn3.xlsx', 'rb')
part = MIMEBase('application', 'octet-stream')
part.set_payload((attachment).read())
encoders.encode_base64(part)
part.add_header('Content-Disposition', 'attachment', filename=('UTF-8', '',
'cfxahn1.xlsx'))
msg.attach(part)
s = smtplib.SMTP(smtpserver)
s.starttls()
s.login('ahnssi98@gmail.com', 'ivzicifbeckyzwwt')
# 메일 전송
s.sendmail("Yangji Storage Center", emailid, msg.as_string())
# -----
# ------
# -----
print(" --- /cfxahn3.xlsx 메일보내기 완료, ---> 5초후 다음 사람 ----> ", name,
storageno, emailid + '\n')
sleep(5)
# input("2 ----> 엔터를 치세요.")
# -----
# ------
# -----
# ------
```