```
#!/usr/bin/env python
# coding: utf-8

# In[49]:



import pandas as pd
import numpy as np

#find
#'1T2013.csv',
file_names = [ '1T2013.csv','2T2013.csv', '3T2013.csv', '4T2013.csv']
data_folder = []
companies = []
for x in file_names:
    data_folder.append(pd.read_csv(x, encoding ='Latin-1', delimiter = ';', engine ='python', quotechar='"', error_bad_lines=False))



# In[50]:
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```
import pandas as pd

def tester():
    df = pd.read_csv('1T2012.csv', encoding='Latin-1', delimiter = ';')
    return df



# In[63]:



class Company:

    def __init__(self, company_code):
        self.reg_ans = company_code
        self.current_rev = 0
        self.prev_trimester_rev = 0
        self.loss_ratio = 0
        self.liquid_margin = 0



    def get_all_data(self, df_array):
        trimesters = [trimester for trimester in df_array]
        complete_company_data = []

        for i in range(len(trimesters)):
            complete_company_data.append(self.get_trimester_data(trimesters[i]))
```

```
    return complete_company_data



def get_trimester_data(self, df):
    company_df = self.get_company_df(df)
    cd_conta_contabil_df = self.get_conta_contabil_df(df)

    current_trimester = df.iloc[1][0]
    current_revenue = self.get_trimester_revenue(company_df)
    current_earnings_after_tax = self.get_trimester_earnings_after_tax(company_df)
    current_loss_cash = self.get_trimester_loss_cash(company_df)
    current_loss_ratio = self.get_trimester_loss_ratio(company_df)
    current_liquid_margin = current_earnings_after_tax / current_revenue

    new_data = {
        'trimester' : current_trimester,
        'revenue' : current_revenue,
        'EAT' : current_earnings_after_tax,
        'loss cash' : current_loss_cash,
        'loss ratio' : current_loss_ratio,
        'liquid margin' : current_liquid_margin
    }



    return new_data
```

```
    def get_company_df(self,df):

        reg_ans_df = df.set_index('REG_ANS')
        company_df = df[(df['REG_ANS'] == self.reg_ans)]
        return company_df




    def get_conta_contabil_df(self,df):
        cd_conta_contabil_df = df.set_index('CD_CONTA_CONTABIL')
        return cd_conta_contabil_df



    def get_trimester_revenue(self, df):

        #print(df)
        rev_df = df[(df['CD_CONTA_CONTABIL'] == 31) | (df['CD_CONTA_CONTABIL'] == 32) |
(df['CD_CONTA_CONTABIL'] == 33)]
        #print(rev_df)
        rev_df['VL_SALDO_FINAL'] = rev_df['VL_SALDO_FINAL'].str.replace(',', '').astype(float)
        current_trimester_rev = rev_df['VL_SALDO_FINAL'].sum()
        current_trimester_rev = current_trimester_rev - self.prev_trimester_rev
        self.current_rev = current_trimester_rev
        self.prev_trimester_rev = current_trimester_rev

        return current_trimester_rev
```

```
    def get_trimester_earnings_after_tax(self, df):
        earnings_after_tax_df = df[(df['CD_CONTA_CONTABIL'] == 69)]
        earnings_after_tax_df['VL_SALDO_FINAL'] =
earnings_after_tax_df['VL_SALDO_FINAL'].str.replace(',', '').astype(float)
        earnings_after_tax = earnings_after_tax_df['VL_SALDO_FINAL'].sum()



        return earnings_after_tax




    def get_trimester_loss_cash(self, df):
        loss_cash_df = df[(df['CD_CONTA_CONTABIL'] == 411)]
        loss_cash_df['VL_SALDO_FINAL'] = loss_cash_df['VL_SALDO_FINAL'].str.replace(',', '').astype(float)
        loss_cash = loss_cash_df['VL_SALDO_FINAL'].sum()



        loss_cash_ratio = loss_cash / self.current_rev


        return loss_cash_ratio


    def get_trimester_loss_ratio(self, df):


        loss_ratio_df = df[(df['CD_CONTA_CONTABIL'] == 41)]
        loss_ratio_df['VL_SALDO_FINAL'] = loss_ratio_df['VL_SALDO_FINAL'].str.replace(',', '').astype(float)
        loss_sum = loss_ratio_df['VL_SALDO_FINAL'].sum()
        trimester_loss_ratio = loss_sum / self.current_rev
```

```
        return trimester_loss_ratio




# In[57]:



def see_specific_company(company, data_folder):

    all_trimesters_data = []

    trimesters = []
    revenue = []
    EAT = []
    loss_cash = []
    loss_ratio = []
    liquid_margin = []



    for x in data_folder:
        trimester_data = company.get_all_data([x])
        all_trimesters_data.append(trimester_data)



    for i in range(len(all_trimesters_data)):
        trimesters.append(all_trimesters_data[i][0]['trimester'])
        revenue.append(all_trimesters_data[i][0]['revenue'])
        EAT.append(all_trimesters_data[i][0]['EAT'])
```

```
        loss_cash.append(all_trimesters_data[i][0]['loss cash'])
        loss_ratio.append(all_trimesters_data[i][0]['loss ratio'])
        liquid_margin.append(all_trimesters_data[i][0]['liquid margin'])



    all_data = [{
        'trimesters': trimesters,
        'revenue' : revenue,
        'EAT' : EAT,
        'loss_cash' : loss_cash,
        'loss_ratio' : loss_ratio,
        'liquid_margin': liquid_margin
    }]

    print("Trimester: ", trimesters)
    print("Revenue: ", revenue)
    print("Earnings After Tax: ", EAT)
    print("Loss Cash: ", loss_cash)
    print("Loss Ratio: ", loss_ratio)
    print("Liquid Margin: ", liquid_margin, "\n\n\n\n\n\n\n\n\n\n")
    plot_company_data(all_data)



# In[58]:
```

```
from matplotlib import pyplot as plt

def plot_company_data(data):
    trimesters = data[0]['trimesters']
    revenue = data[0]['revenue']
    EAT = data[0]['EAT']
    loss_cash = data[0]['loss_cash']
    loss_ratio = data[0]['loss_ratio']
    liquid_margin = data[0]['liquid_margin']


    fig, axes = plt.subplots(2,3, figsize=(15,10))
    axes[1][2].set_visible(False)

    axes[1][0].set_position([0.24,0.125,0.228,0.343])
    axes[1][1].set_position([0.55,0.125,0.228,0.343])
    print(trimesters)
    print(revenue)
    axes[0][0].plot(trimesters, revenue)
    axes[0][1].plot(trimesters, EAT)
    axes[0][2].plot(trimesters, loss_cash)
    axes[1][0].plot(trimesters, loss_ratio)
    axes[1][1].plot(trimesters, liquid_margin)

    plt.show()
```

```
# In[62]:


def tester_main():
    print("what is the code for the company?")
    company = Company(input())



    see_specific_company(company, data_folder)


tester_main()


# In[ ]:
```