import pandas as pd

import numpy as np

import xlsxwriter

from openpyxl import Workbook

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

from openpyxl.chart import BarChart, PieChart, LineChart, Reference

from openpyxl.utils import get\_column\_letter

# Criar um novo workbook

wb = Workbook()

# Configurar as abas

ws1 = wb.active

ws1.title = "Dados da Empresa"

ws2 = wb.create\_sheet(title="Comparativo Tribut√°rio")

ws3 = wb.create\_sheet(title="Visualiza√ß√£o")

ws4 = wb.create\_sheet(title="Informa√ß√µes Tribut√°rias")

# Definir cores e estilos

header\_fill = PatternFill(start\_color='1F4E78', end\_color='1F4E78', fill\_type='solid')

input\_fill = PatternFill(start\_color='DDEBF7', end\_color='DDEBF7', fill\_type='solid')

result\_fill = PatternFill(start\_color='E2EFDA', end\_color='E2EFDA', fill\_type='solid')

border = Border(left=Side(style='thin'), right=Side(style='thin'), top=Side(style='thin'), bottom=Side(style='thin'))

header\_font = Font(bold=True, color='FFFFFF')

bold\_font = Font(bold=True)

title\_font = Font(bold=True, size=14)

# Fun√ß√£o para aplicar estilo de cabe√ßalho

def apply\_header\_style(cell):

cell.fill = header\_fill

cell.font = header\_font

cell.border = border

cell.alignment = Alignment(horizontal='center', vertical='center')

# Fun√ß√£o para aplicar estilo de entrada

def apply\_input\_style(cell):

cell.fill = input\_fill

cell.border = border

cell.protection = Protection(locked=False)

# Fun√ß√£o para aplicar estilo de resultado

def apply\_result\_style(cell):

cell.fill = result\_fill

cell.border = border

cell.font = bold\_font

# Fun√ß√£o para aplicar estilo de t√≠tulo

def apply\_title\_style(cell):

cell.font = title\_font

cell.alignment = Alignment(horizontal='center')

# Configurar aba "Dados da Empresa"

ws1['A1'] = "PLANILHA DE COMPARA√á√ÉO TRIBUT√ÅRIA: BRASIL/PORTUGAL VS. DUBAI"

apply\_title\_style(ws1['A1'])

ws1.merge\_cells('A1:F1')

# Se√ß√£o de dados da empresa

ws1['A3'] = "DADOS DA EMPRESA"

apply\_header\_style(ws1['A3'])

ws1.merge\_cells('A3:F3')

ws1['A4'] = "Nome da Empresa:"

ws1['A5'] = "Pa√≠s de Origem:"

ws1['A6'] = "Setor:"

ws1['A7'] = "Tipo de Neg√≥cio:"

for row in range(4, 8):

apply\_input\_style(ws1[f'C{row}'])

ws1[f'C{row}'].alignment = Alignment(horizontal='left')

ws1.merge\_cells(f'C{row}:F{row}')

# Adicionar lista suspensa para Pa√≠s de Origem

ws1['C5'].value = "Brasil" # Valor padr√£o

# Nota: Em um ambiente real, adicionar√≠amos valida√ß√£o de dados aqui

# Adicionar lista suspensa para Tipo de Neg√≥cio

ws1['C7'].value = "B2B" # Valor padr√£o

# Se√ß√£o de dados financeiros

ws1['A9'] = "DADOS FINANCEIROS ANUAIS (USD)"

apply\_header\_style(ws1['A9'])

ws1.merge\_cells('A9:F9')

ws1['A10'] = "Receita Bruta:"

ws1['A11'] = "Custos Operacionais:"

ws1['A12'] = "Folha de Pagamento:"

ws1['A13'] = "Lucro Antes dos Impostos:"

for row in range(10, 14):

apply\_input\_style(ws1[f'C{row}'])

ws1[f'C{row}'].alignment = Alignment(horizontal='right')

ws1.merge\_cells(f'C{row}:F{row}')

# Formato de n√∫mero para valores monet√°rios

ws1[f'C{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Se√ß√£o de proje√ß√µes para Dubai

ws1['A15'] = "PROJE√á√ïES PARA DUBAI"

apply\_header\_style(ws1['A15'])

ws1.merge\_cells('A15:F15')

ws1['A16'] = "% Opera√ß√µes a transferir:"

ws1['A17'] = "Crescimento projetado:"

ws1['A18'] = "Redu√ß√£o de custos:"

for row in range(16, 19):

apply\_input\_style(ws1[f'C{row}'])

ws1[f'C{row}'].alignment = Alignment(horizontal='right')

ws1.merge\_cells(f'C{row}:D{row}')

# Formato de percentual

ws1[f'C{row}'].number\_format = '0.00%'

ws1['E16'] = "%"

ws1['E17'] = "%"

ws1['E18'] = "%"

# Ajustar largura das colunas

ws1.column\_dimensions['A'].width = 25

ws1.column\_dimensions['B'].width = 5

ws1.column\_dimensions['C'].width = 15

ws1.column\_dimensions['D'].width = 15

ws1.column\_dimensions['E'].width = 5

ws1.column\_dimensions['F'].width = 15

# Configurar aba "Comparativo Tribut√°rio"

ws2['A1'] = "COMPARATIVO TRIBUT√ÅRIO"

apply\_title\_style(ws2['A1'])

ws2.merge\_cells('A1:F1')

# Tributa√ß√£o no pa√≠s de origem (Brasil)

ws2['A3'] = "TRIBUTA√á√ÉO NO PA√çS DE ORIGEM (BRASIL)"

apply\_header\_style(ws2['A3'])

ws2.merge\_cells('A3:F3')

ws2['A4'] = "Imposto"

ws2['C4'] = "Base de C√°lculo"

ws2['D4'] = "Al√≠quota"

ws2['E4'] = "Valor"

for col in ['A', 'C', 'D', 'E']:

apply\_header\_style(ws2[f'{col}4'])

# Lista de impostos brasileiros

impostos\_br = [

"IRPJ",

"Adicional IRPJ (>20k/m√™s)",

"CSLL",

"PIS",

"COFINS",

"ISS (se aplic√°vel)",

"ICMS (se aplic√°vel)",

"Contribui√ß√µes Previdenci√°rias"

]

aliquotas\_br = [

"15%",

"10%",

"9%",

"1,65%",

"7,6%",

"2-5%",

"17-19%",

"20%"

]

# Preencher impostos brasileiros

for i, imposto in enumerate(impostos\_br):

row = i + 5

ws2[f'A{row}'] = imposto

ws2[f'C{row}'] = "=IF('Dados da Empresa'!C5=\"Brasil\",IF(ROW()=5,'Dados da Empresa'!C13,\"Calculado\"),\"N/A\")"

ws2[f'D{row}'] = aliquotas\_br[i]

ws2[f'E{row}'] = "=IF('Dados da Empresa'!C5=\"Brasil\",ROUND(C5\*SUBSTITUTE(D5,\"%\",\"\")/100,2),0)"

ws2[f'A{row}'].border = border

ws2[f'C{row}'].border = border

ws2[f'D{row}'].border = border

ws2[f'E{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws2[f'E{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Totais para Brasil

ws2['A13'] = "CARGA TRIBUT√ÅRIA TOTAL"

ws2['A14'] = "% SOBRE RECEITA BRUTA"

ws2['A15'] = "% SOBRE LUCRO"

ws2['E13'] = "=SUM(E5:E12)"

ws2['E14'] = "=IF('Dados da Empresa'!C10>0,E13/'Dados da Empresa'!C10,0)"

ws2['E15'] = "=IF('Dados da Empresa'!C13>0,E13/'Dados da Empresa'!C13,0)"

for row in range(13, 16):

ws2[f'A{row}'].font = bold\_font

ws2[f'A{row}'].border = border

ws2[f'E{row}'].border = border

apply\_result\_style(ws2[f'E{row}'])

# Formato percentual

ws2['E14'].number\_format = '0.00%'

ws2['E15'].number\_format = '0.00%'

# Tributa√ß√£o em Dubai - Mainland

ws2['A17'] = "TRIBUTA√á√ÉO EM DUBAI - MAINLAND"

apply\_header\_style(ws2['A17'])

ws2.merge\_cells('A17:F17')

ws2['A18'] = "Imposto"

ws2['C18'] = "Base de C√°lculo"

ws2['D18'] = "Al√≠quota"

ws2['E18'] = "Valor"

for col in ['A', 'C', 'D', 'E']:

apply\_header\_style(ws2[f'{col}18'])

# Lista de impostos Dubai Mainland

impostos\_mainland = [

"Imposto Corporativo",

"Taxas de Licen√ßa",

"Outras Taxas"

]

aliquotas\_mainland = [

"9%\*",

"-",

"-"

]

bases\_mainland = [

"=IF('Dados da Empresa'!C13\*'Dados da Empresa'!C16>375000\*3.67,'Dados da Empresa'!C13\*'Dados da Empresa'!C16-375000\*3.67,'Dados da Empresa'!C13\*'Dados da Empresa'!C16)",

"Fixo",

"Fixo"

]

valores\_mainland = [

"=IF(C19>375000\*3.67,(C19-375000\*3.67)\*0.09,0)",

"=5000",

"=2000"

]

# Preencher impostos Dubai Mainland

for i, imposto in enumerate(impostos\_mainland):

row = i + 19

ws2[f'A{row}'] = imposto

ws2[f'C{row}'] = bases\_mainland[i]

ws2[f'D{row}'] = aliquotas\_mainland[i]

ws2[f'E{row}'] = valores\_mainland[i]

ws2[f'A{row}'].border = border

ws2[f'C{row}'].border = border

ws2[f'D{row}'].border = border

ws2[f'E{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws2[f'E{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Totais para Dubai Mainland

ws2['A22'] = "CARGA TRIBUT√ÅRIA TOTAL"

ws2['A23'] = "% SOBRE RECEITA BRUTA"

ws2['A24'] = "% SOBRE LUCRO"

ws2['E22'] = "=SUM(E19:E21)"

ws2['E23'] = "=IF('Dados da Empresa'!C10>0,E22/'Dados da Empresa'!C10,0)"

ws2['E24'] = "=IF('Dados da Empresa'!C13>0,E22/'Dados da Empresa'!C13,0)"

for row in range(22, 25):

ws2[f'A{row}'].font = bold\_font

ws2[f'A{row}'].border = border

ws2[f'E{row}'].border = border

apply\_result\_style(ws2[f'E{row}'])

# Formato percentual

ws2['E23'].number\_format = '0.00%'

ws2['E24'].number\_format = '0.00%'

# Nota sobre imposto corporativo

ws2['A25'] = "\* Aplic√°vel apenas para lucros acima de 375.000 AED (~102.000 USD)"

ws2.merge\_cells('A25:F25')

ws2['A25'].font = Font(italic=True, size=8)

# Tributa√ß√£o em Dubai - Free Zone

ws2['A27'] = "TRIBUTA√á√ÉO EM DUBAI - FREE ZONE"

apply\_header\_style(ws2['A27'])

ws2.merge\_cells('A27:F27')

ws2['A28'] = "Imposto"

ws2['C28'] = "Base de C√°lculo"

ws2['D28'] = "Al√≠quota"

ws2['E28'] = "Valor"

for col in ['A', 'C', 'D', 'E']:

apply\_header\_style(ws2[f'{col}28'])

# Lista de impostos Dubai Free Zone

impostos\_freezone = [

"Imposto Corporativo",

"Taxas de Licen√ßa",

"Taxas de Free Zone"

]

aliquotas\_freezone = [

"0%",

"-",

"-"

]

bases\_freezone = [

"='Dados da Empresa'!C13\*'Dados da Empresa'!C16",

"Fixo",

"Fixo"

]

valores\_freezone = [

"=0",

"=6500",

"=3000"

]

# Preencher impostos Dubai Free Zone

for i, imposto in enumerate(impostos\_freezone):

row = i + 29

ws2[f'A{row}'] = imposto

ws2[f'C{row}'] = bases\_freezone[i]

ws2[f'D{row}'] = aliquotas\_freezone[i]

ws2[f'E{row}'] = valores\_freezone[i]

ws2[f'A{row}'].border = border

ws2[f'C{row}'].border = border

ws2[f'D{row}'].border = border

ws2[f'E{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws2[f'E{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Totais para Dubai Free Zone

ws2['A32'] = "CARGA TRIBUT√ÅRIA TOTAL"

ws2['A33'] = "% SOBRE RECEITA BRUTA"

ws2['A34'] = "% SOBRE LUCRO"

ws2['E32'] = "=SUM(E29:E31)"

ws2['E33'] = "=IF('Dados da Empresa'!C10>0,E32/'Dados da Empresa'!C10,0)"

ws2['E34'] = "=IF('Dados da Empresa'!C13>0,E32/'Dados da Empresa'!C13,0)"

for row in range(32, 35):

ws2[f'A{row}'].font = bold\_font

ws2[f'A{row}'].border = border

ws2[f'E{row}'].border = border

apply\_result\_style(ws2[f'E{row}'])

# Formato percentual

ws2['E33'].number\_format = '0.00%'

ws2['E34'].number\_format = '0.00%'

# Tributa√ß√£o em Dubai - Offshore

ws2['A36'] = "TRIBUTA√á√ÉO EM DUBAI - OFFSHORE"

apply\_header\_style(ws2['A36'])

ws2.merge\_cells('A36:F36')

ws2['A37'] = "Imposto"

ws2['C37'] = "Base de C√°lculo"

ws2['D37'] = "Al√≠quota"

ws2['E37'] = "Valor"

for col in ['A', 'C', 'D', 'E']:

apply\_header\_style(ws2[f'{col}37'])

# Lista de impostos Dubai Offshore

impostos\_offshore = [

"Imposto Corporativo",

"Taxas de Registro",

"Taxas de Manuten√ß√£o"

]

aliquotas\_offshore = [

"0%",

"-",

"-"

]

bases\_offshore = [

"='Dados da Empresa'!C13\*'Dados da Empresa'!C16",

"Fixo",

"Fixo"

]

valores\_offshore = [

"=0",

"=3800",

"=2000"

]

# Preencher impostos Dubai Offshore

for i, imposto in enumerate(impostos\_offshore):

row = i + 38

ws2[f'A{row}'] = imposto

ws2[f'C{row}'] = bases\_offshore[i]

ws2[f'D{row}'] = aliquotas\_offshore[i]

ws2[f'E{row}'] = valores\_offshore[i]

ws2[f'A{row}'].border = border

ws2[f'C{row}'].border = border

ws2[f'D{row}'].border = border

ws2[f'E{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws2[f'E{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Totais para Dubai Offshore

ws2['A41'] = "CARGA TRIBUT√ÅRIA TOTAL"

ws2['A42'] = "% SOBRE RECEITA BRUTA"

ws2['A43'] = "% SOBRE LUCRO"

ws2['E41'] = "=SUM(E38:E40)"

ws2['E42'] = "=IF('Dados da Empresa'!C10>0,E41/'Dados da Empresa'!C10,0)"

ws2['E43'] = "=IF('Dados da Empresa'!C13>0,E41/'Dados da Empresa'!C13,0)"

for row in range(41, 44):

ws2[f'A{row}'].font = bold\_font

ws2[f'A{row}'].border = border

ws2[f'E{row}'].border = border

apply\_result\_style(ws2[f'E{row}'])

# Formato percentual

ws2['E42'].number\_format = '0.00%'

ws2['E43'].number\_format = '0.00%'

# Comparativo de Economia Fiscal

ws2['A45'] = "COMPARATIVO DE ECONOMIA FISCAL"

apply\_header\_style(ws2['A45'])

ws2.merge\_cells('A45:F45')

ws2['A46'] = ""

ws2['C46'] = "Valor (USD)"

ws2['E46'] = "% Economia"

for col in ['C', 'E']:

apply\_header\_style(ws2[f'{col}46'])

# Lista de op√ß√µes para comparativo

opcoes\_comparativo = [

"Pa√≠s de Origem",

"Dubai - Mainland",

"Dubai - Free Zone",

"Dubai - Offshore"

]

valores\_comparativo = [

"=E13",

"=E22",

"=E32",

"=E41"

]

economias\_comparativo = [

"=-",

"=IF(E47>0,(E47-E48)/E47,0)",

"=IF(E47>0,(E47-E49)/E47,0)",

"=IF(E47>0,(E47-E50)/E47,0)"

]

# Preencher comparativo

for i, opcao in enumerate(opcoes\_comparativo):

row = i + 47

ws2[f'A{row}'] = opcao

ws2[f'C{row}'] = valores\_comparativo[i]

ws2[f'E{row}'] = economias\_comparativo[i]

ws2[f'A{row}'].border = border

ws2[f'C{row}'].border = border

ws2[f'E{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws2[f'C{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Formato percentual

ws2[f'E{row}'].number\_format = '0.00%'

apply\_result\_style(ws2[f'C{row}'])

apply\_result\_style(ws2[f'E{row}'])

# Ajustar largura das colunas

ws2.column\_dimensions['A'].width = 30

ws2.column\_dimensions['B'].width = 5

ws2.column\_dimensions['C'].width = 20

ws2.column\_dimensions['D'].width = 10

ws2.column\_dimensions['E'].width = 15

ws2.column\_dimensions['F'].width = 10

# Configurar aba "Visualiza√ß√£o"

ws3['A1'] = "VISUALIZA√á√ÉO GR√ÅFICA"

apply\_title\_style(ws3['A1'])

ws3.merge\_cells('A1:I1')

# Dados para gr√°ficos

ws3['A3'] = "Estrutura"

ws3['B3'] = "Carga Tribut√°ria (USD)"

ws3['C3'] = "% Sobre Lucro"

ws3['D3'] = "Economia (%)"

for col in ['A', 'B', 'C', 'D']:

apply\_header\_style(ws3[f'{col}3'])

opcoes\_graficos = [

"Pa√≠s de Origem",

"Dubai - Mainland",

"Dubai - Free Zone",

"Dubai - Offshore"

]

valores\_graficos = [

"='Comparativo Tribut√°rio'!C47",

"='Comparativo Tribut√°rio'!C48",

"='Comparativo Tribut√°rio'!C49",

"='Comparativo Tribut√°rio'!C50"

]

percentuais\_graficos = [

"='Comparativo Tribut√°rio'!E15",

"='Comparativo Tribut√°rio'!E24",

"='Comparativo Tribut√°rio'!E34",

"='Comparativo Tribut√°rio'!E43"

]

economias\_graficos = [

"=0",

"='Comparativo Tribut√°rio'!E48",

"='Comparativo Tribut√°rio'!E49",

"='Comparativo Tribut√°rio'!E50"

]

# Preencher dados para gr√°ficos

for i, opcao in enumerate(opcoes\_graficos):

row = i + 4

ws3[f'A{row}'] = opcao

ws3[f'B{row}'] = valores\_graficos[i]

ws3[f'C{row}'] = percentuais\_graficos[i]

ws3[f'D{row}'] = economias\_graficos[i]

ws3[f'A{row}'].border = border

ws3[f'B{row}'].border = border

ws3[f'C{row}'].border = border

ws3[f'D{row}'].border = border

# Formato de n√∫mero para valores monet√°rios

ws3[f'B{row}'].number\_format = '\_($\* #,##0.00\_);\_($\* (#,##0.00);\_($\* "-"??\_);\_(@\_)'

# Formato percentual

ws3[f'C{row}'].number\_format = '0.00%'

ws3[f'D{row}'].number\_format = '0.00%'

# Criar gr√°fico de barras para carga tribut√°ria

chart1 = BarChart()

chart1.title = "Comparativo de Carga Tribut√°ria"

chart1.style = 10

chart1.x\_axis.title = "Estrutura"

chart1.y\_axis.title = "Valor (USD)"

data = Reference(ws3, min\_col=2, min\_row=3, max\_row=7, max\_col=2)

cats = Reference(ws3, min\_col=1, min\_row=4, max\_row=7)

chart1.add\_data(data, titles\_from\_data=True)

chart1.set\_categories(cats)

chart1.shape = 4

ws3.add\_chart(chart1, "F3")

# Criar gr√°fico de barras para percentual sobre lucro

chart2 = BarChart()

chart2.title = "% Sobre Lucro"

chart2.style = 10

chart2.x\_axis.title = "Estrutura"

chart2.y\_axis.title = "Percentual"

data = Reference(ws3, min\_col=3, min\_row=3, max\_row=7, max\_col=3)

cats = Reference(ws3, min\_col=1, min\_row=4, max\_row=7)

chart2.add\_data(data, titles\_from\_data=True)

chart2.set\_categories(cats)

chart2.shape = 4

ws3.add\_chart(chart2, "F18")

# Criar gr√°fico de barras para economia percentual

chart3 = BarChart()

chart3.title = "Economia Fiscal (%)"

chart3.style = 10

chart3.x\_axis.title = "Estrutura"

chart3.y\_axis.title = "Percentual de Economia"

data = Reference(ws3, min\_col=4, min\_row=3, max\_row=7, max\_col=4)

cats = Reference(ws3, min\_col=1, min\_row=4, max\_row=7)

chart3.add\_data(data, titles\_from\_dat

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