timesheet calculator

Choose the xlrd, xlwt, and tkinter modules in Python

```
import xlrd
import xlwt
import tkinter as tk
```

Create a timetable as input

```
def create_table():
    workbook = xlwt.Workbook(encoding= 'ascii')
    worksheet = workbook.add_sheet("Sheet1")
    worksheet.write(0,0, "Name")
    worksheet.write(0,1, "Department/Proffesion")
    for i in range(31):
        worksheet.write(0,2+i,str(i+1)+' day')
    worksheet.write(0,33, "Days/hours from 1 to 15")
    worksheet.write(0,34, "Day/hours from 1 to 31")
    workbook.save("timesheet_input.xls")
```

The following timesheet is used as input:(timesheet_input.xls)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Name	Department/Proffesior	1 day	2 day	3 day	4 day	5 day	6 day	7 day	8 day	9 day	10 day	11 day	12 day	13 day	14 day
2	A	Ш_Тр	O	O												
3	B	Щ_Тр			O	O	O									
4	C	Н_Тр						O	O	O	O					
5	D	К_Тр								O		O	O	O	O	O
6	E	М_Тр														O
7	F	С_О				O		O								
8	G	Ш_1_О														
9	H	Ш_2_О		O		O				O						O
10																
11																
12																

Create dictionary:

Create a mapping between position and time

Create a mapping between positions and departments

```
part_time = {'Ш_Тр':0.25,'Щ_Тр ':0.25,'Н_Тр':0.25,'К_Тр':0.2,'М_Тр':0.1,'С_О':0.25,'Ш_1_О':0.25,'Ш_2_О':0.25}
department = {'Ш_Тр':'Tr','Щ_Тр ':'Tr','Н_Тр':'Tr','К_Тр':'Tr','М_Тр':'Tr','С_О':'o','Ш_1_О':'o','Ш_2_О':'o'}
```

Function, calculate:

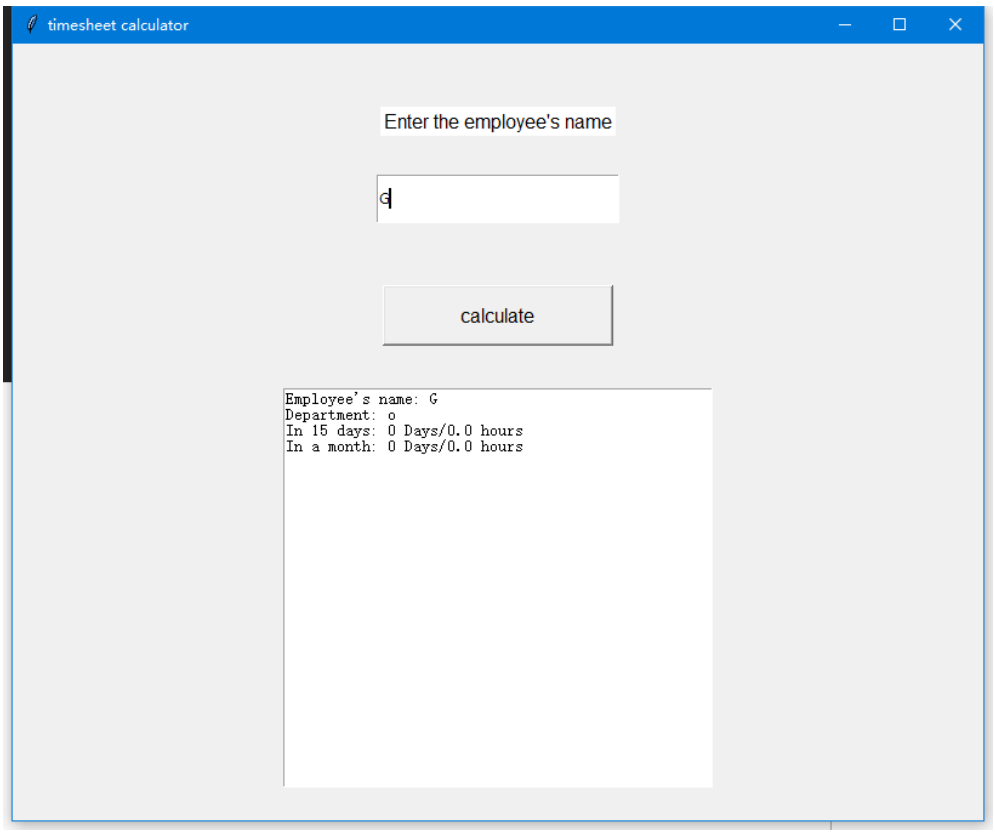
```
def get_result(row):
    name = datasheet.cell_value(row,0)
    pos = datasheet.cell_value(row,1)
    rowdata=datasheet.row_values(row,2,33)
    rate = part_time[pos]
    dep = department[pos]
    day15 = 0
    day31 = 0
    for i in range(15):
        if rowdata[i]=='0':
            day15+=1
    for j in range(31):
        if rowdata[j]=='0':
            day31+=1
    result = ('Employee\'s name: ' + str(name) + '\n'
              'Department: ' + str(dep) + '\n'
              'In 15 days: ' + str(day15) + ' Days' + '/' + str(rate*day15*8) + ' hours' + '\n'
              'In a month: ' + str(day31) + ' Days' + '/' + str(rate*day31*8) + ' hours')
    return result
```

Use Python Tkinter to build a GUI:

Use Python Tkinter to build a GUI

```
window=tk.Tk()
window.title('timesheet calculator')
window.geometry('800x640')
text = tk.StringVar()
entry = tk.Entry(window,textvariable=text)
title = tk.Label(window,text='Enter the employee\'s name',bg='white',font=('Arial', 12))
title.place(relx=0.5,rely=0.1,anchor="center")
text.set('')
entry.place(relx=0.5,rely=0.2,anchor="center",height=40,width=200)
def printEntry():
    var= show_result(text.get())
    t.delete("1.0","end")
    t.insert('end', var)
button = tk.Button(window,text='calculate',command=printEntry,height=2,width=20,font=('Arial', 12))
button.place(relx=0.5,rely=0.35,anchor="center")
t = tk.Text(width=50, height=25)
t.place(relx=0.5,rely=0.7,anchor="center")
window.mainloop()
```

Running result:



When the result is not queried: