Income Tax Calculator (For A Salaried Person)

Assignment 1 Report

Submitted By : Group 1

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Student Declaration

This is to declare that this report has been written by us (Group 1). No part of the report is copied from other sources. All information included from other sources have been duly acknowledged. We aver that if any part of the report is found to be copied, We shall take full responsibility for it.

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Place : Bahraich , Uttar Pradesh

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Acknowledgement

We are overwhelmed in all humbleness and gratefulness to our teacher and guide **Ms. Gagandeep Kaur** who provided wholesome direction and support to us at every stage of our project.
Her wisdom , knowledge and commitment to the highest standards inspired and motivated us to successfully complete this project.

Mohit Kumar Mahato – 09
Rocky Sharaf – 70
Qazi Maaz Arshad – 26

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Purpose Of Project

The main aim of our project is to built a GUI (Graphical User Interface) application to calculate the liable tax of a salaried person. This application aims at providing a user-friendly approach to calculate the payable tax without digging into complex details and calculations.
Our income tax calculator helps user to manage their taxes and choose the best suitable tax regime (old or new). Our calculator gives user the opportunity to check how much they can save by opting one tax system over the other.

Basic Fundamentals Of Income Tax Calculations

Income Tax is an annual tax on income. The Indian Income Tax Act (Section 4) provides that in respect of total income of the previous year of every person income tax shall be charged for the corresponding assessment year at the rates laid down by the Financial Act for that assessment year. Section 14 of the Income Tax Act further provides that for the purpose of charge of income tax and computation of total income all incomes shall be classified under the following heads of income :

Salaries
Income from house property
Profits or gains of business or profession
Capital gains
Income from other sources (not covered in above four categories)

The total income from all the above heads of income is calculated in accordance with the provisions of the Act as they stand on the first

day of April of any assessment year.
But tax rates are not applied on total income ,tax rates are applied on Total Taxable Income which is calculated after the deductions in total income.

Tax deductions is a reduction in tax obligation from Gross Income. Tax deduction varies in amount as different incomes are treated differently under various sections of Income Tax Act these are :

80C (Bank FD's , LIC Premium , Tuition fees etc.)
80CCC (Pension Funds)
80CCD (Pension Funds by Central Government)
80TTA (Interests on Bank Savings Account)
80CCG (Equity Saving Schemes)
80CCF (Long Term Infrastructure Bonds)
80D (Medical Insurance)
80E (Education Loan)
Other sections are 80EE, 80G ,80CGA ,80GGB ,80GC)
The total deductions from all the sources is calculated in accordance with the provisions of the Act as they stand on the first day of April of any assessment year.

Taxable Income = Total Gross Income – Total Deductions

Taxable Income Slab (INR)	Existing Tax Rate	New Tax Rate
Upto 250,000	NIL	NIL
250,000 to 500,000	5%	5%
500,000 to 750,000	20%	10%
750,000 to 10,00,000	20%	15%
10,00,000 to 12,50,000	30%	20%
12,50,000 to 15,00,000	30%	25%
15,00,000 and above	30%	30%

Net Payable Tax = (Tax Rate) x (Taxable Income)

Project Description

Our calculator has a very simple design , any user who is not aware of basic calculations involved in calculating income tax can easily operate.

At first users need to click on the ***Start*** button to proceed .

Then Users needs to enter their details like Name, Contact No. and Email Id for record purposes.

Users can always check current tax slabs rates by clicking on a button in the bottom right corner ***(Check Taxes Scheme)***.

After entering basic details Users needs to press the ***next*** button and they are taken to next page.

Users now need to enter their total annual income (sum of salaries, profits, capital gains etc.) for the current assessment year .

Then users need to enter the sum of all deductions (pensions, education loan , medical insurance etc.).

After providing the above inputs users need to click on the ***calculate*** button and the output will be displayed.

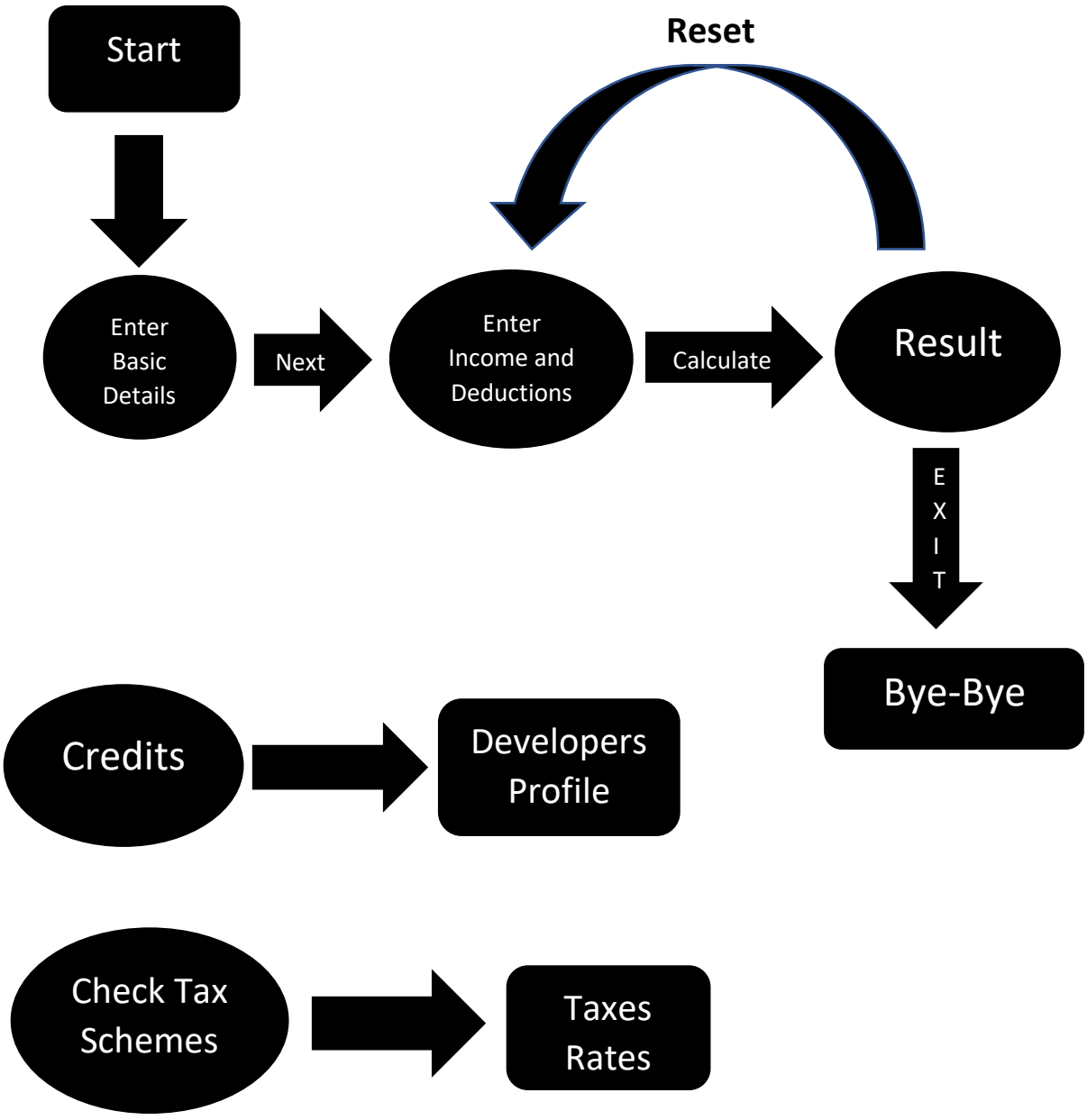
The ***output*** format will be :
Old Tax : XXXX [Payable tax according to earlier tax slab rates]
New Tax : XXXX [Payable tax according to new tax slab rates]
Tax Savings : XXXX [Difference between Old Tax and New Tax]
Better Option : XXXX [Suggestion to choose preferable Tax Scheme]

Users can always reset the input values by clicking the ***Reset*** button.

Upon clicking the ***Credits*** button in the bottom right corner a pop up window appears having details of all the developers who contributed in designing and execution of this application.

The ***Exit*** button in the bottom right corner successfully terminates the application and calculator is closed.

Application Walkthrough



How We Built This GUI Application

To design this ***Income Tax Calculator***, we have followed a very planned approach. We have gone through multiple online income tax calculators and observed their format as well as their functioning. We have spent a great amount of time and effort in studying the Income Tax basics and laws and regulations of Income Tax Act.

We have used Python Tkinter to built this GUI application we have worked on different platforms like Anaconda and Pycharm.

We have made this application very user-friendly. The background image we have used has a very good combination of colors making it more attractive and beautiful.

SWOT Analysis

Strengths

User-Friendly: All users can learn to use our calculator quickly and use it efficiently.
Works Offline: No need of an active internet connection.
Simplicity: Users need not to dig into complex rules and understanding of Income Tax.
Additional Feature: Calculator suggests preferable tax scheme and calculate savings.

Weakness

Pre-Calculation: Users need to be ready with total income and total deductions figure.
Specific: Our calculator is designed only for salaried Indian individual. Taxes of businesses and foreign currency cannot be calculated.
Unnecessary Feature: Asking basic details is irrelevant from Users point of view.

Opportunities

Reduce Prerequisite: We can add calculation of Total Income from various sources and calculation of Total Deductions under various sections of Income Tax Act.
Extension: We can target other groups (ex. Businesses) by adding tax calculation system for them also.

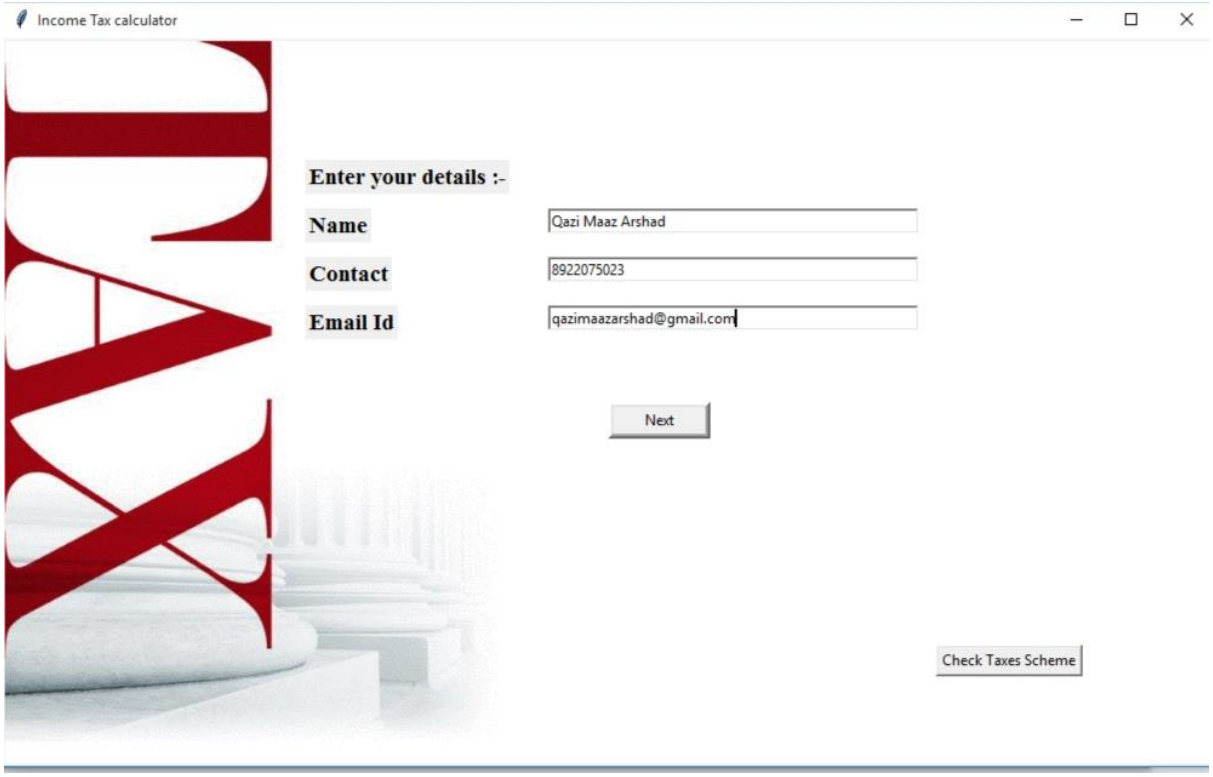
Threats

Competition: Clients are more likely to use another calculator because most of them target multiple audience groups and offer other features like calculating Total Income and Total Deductions.
Government's Taxation Rules and Policy Amendment: We will have to update all the mathematics if new taxation system is introduced.

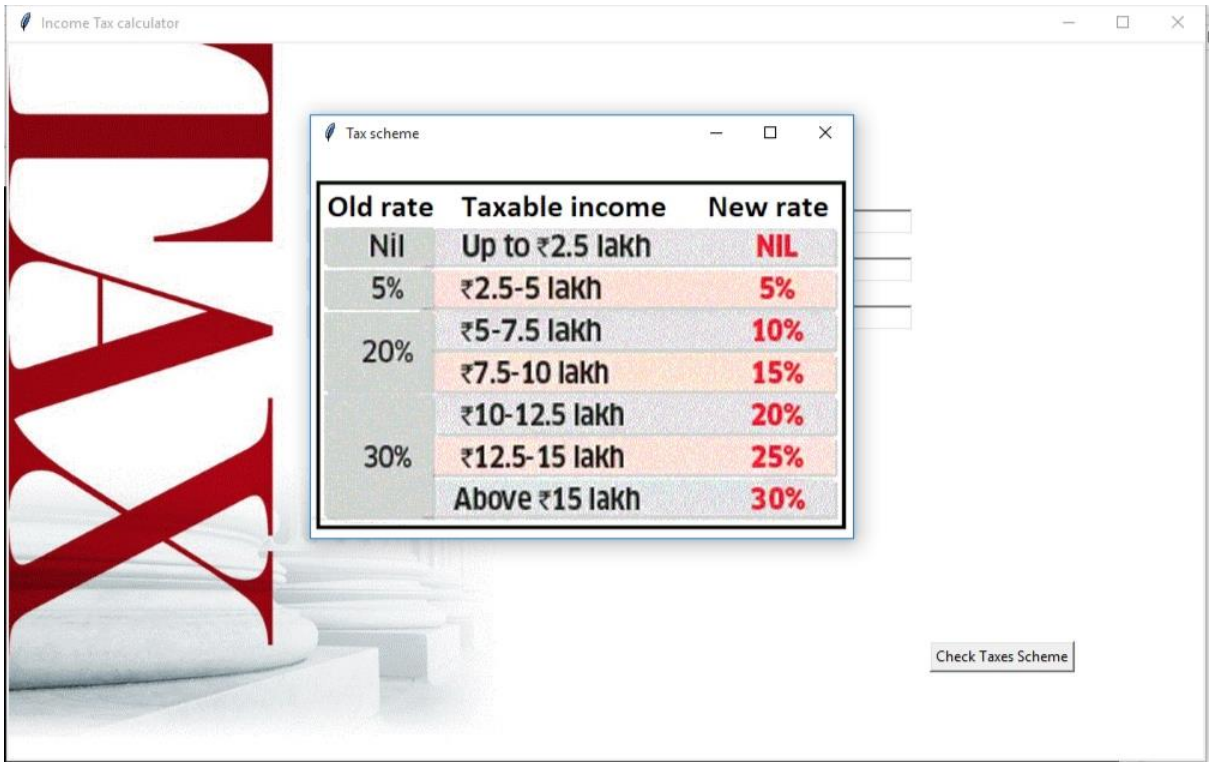
Screenshots

Home Page

Enter Basic Details

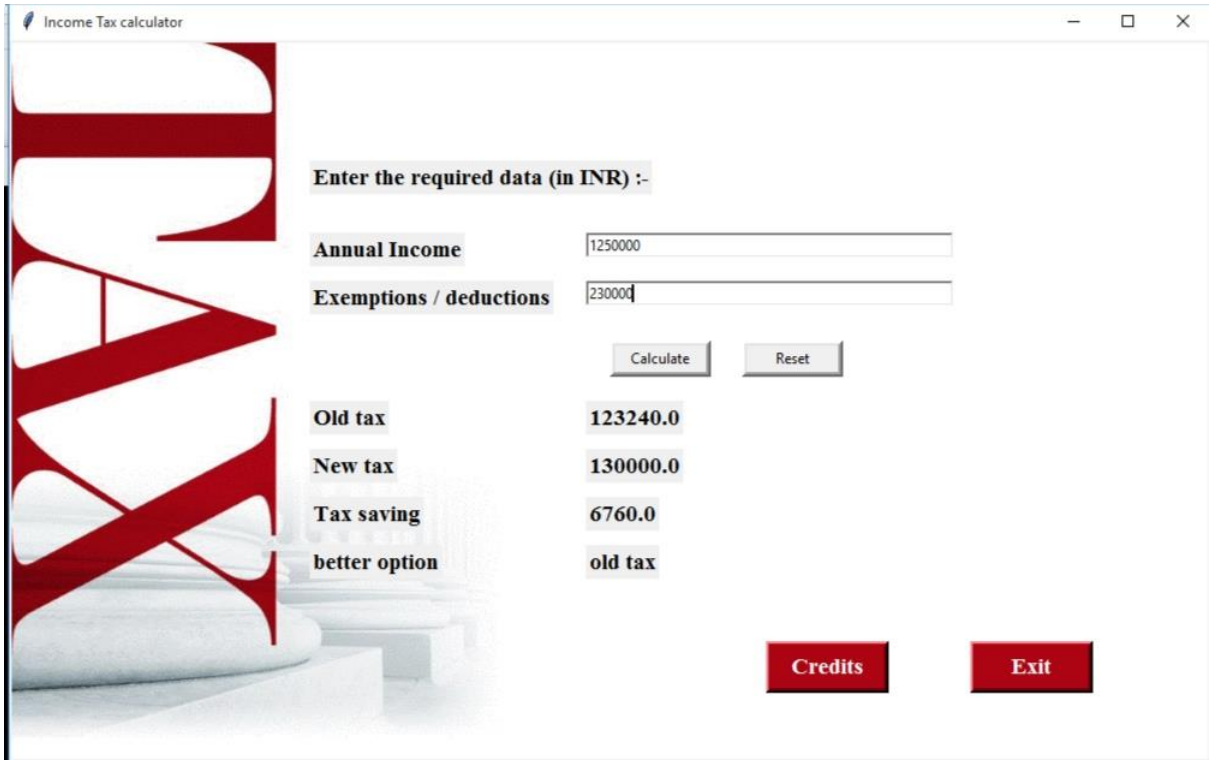


Check Taxes Scheme

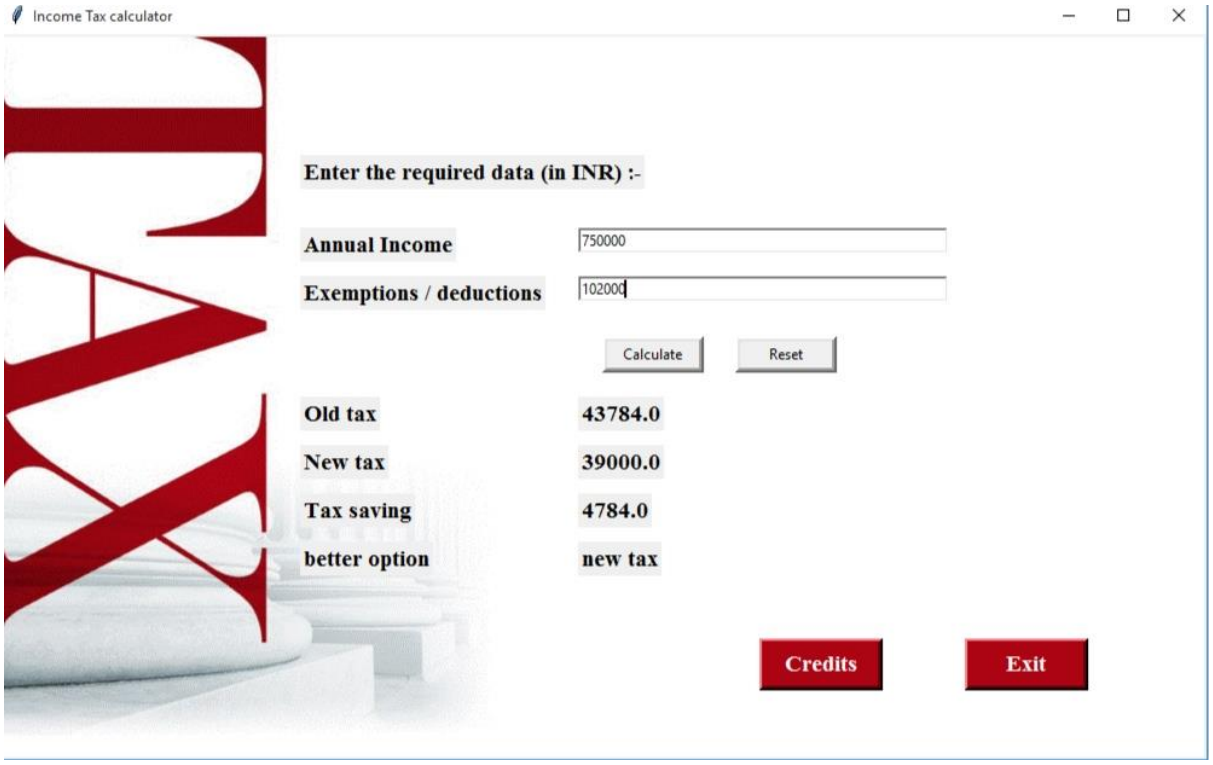


Enter Income and Deductions and Calculate -

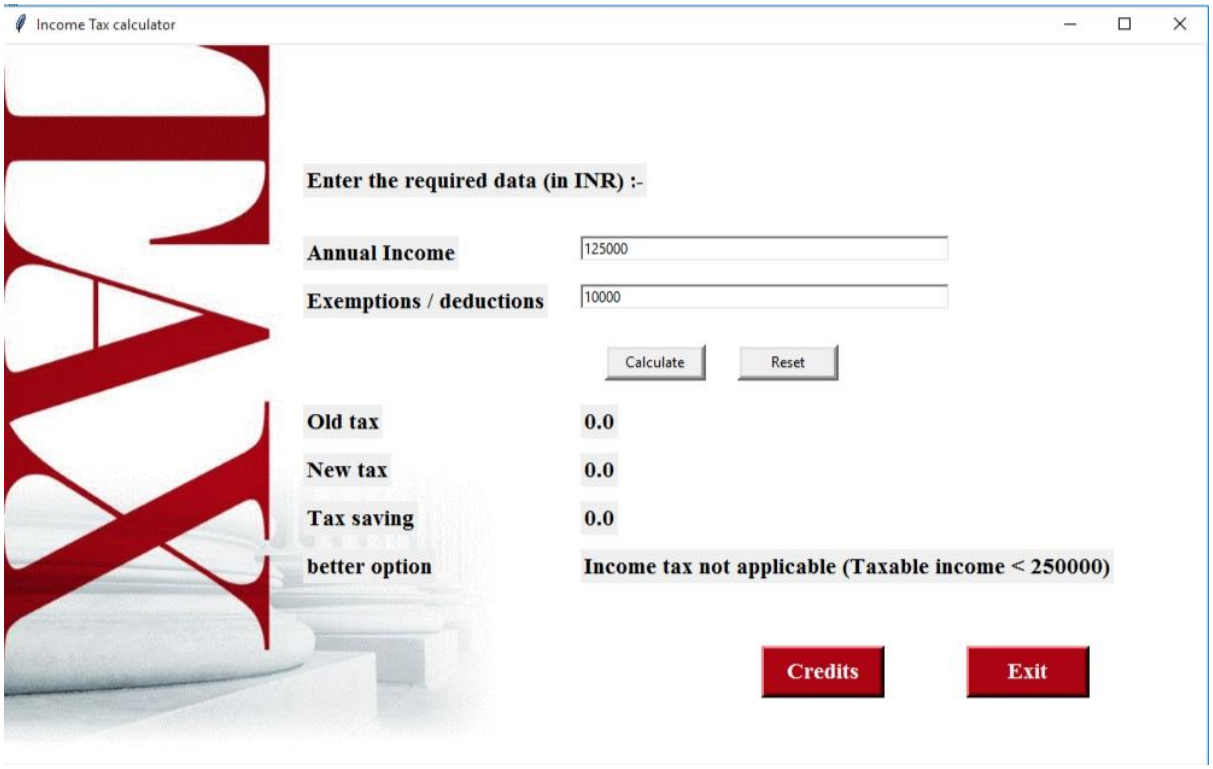
Output When Better Option Is Old Tax



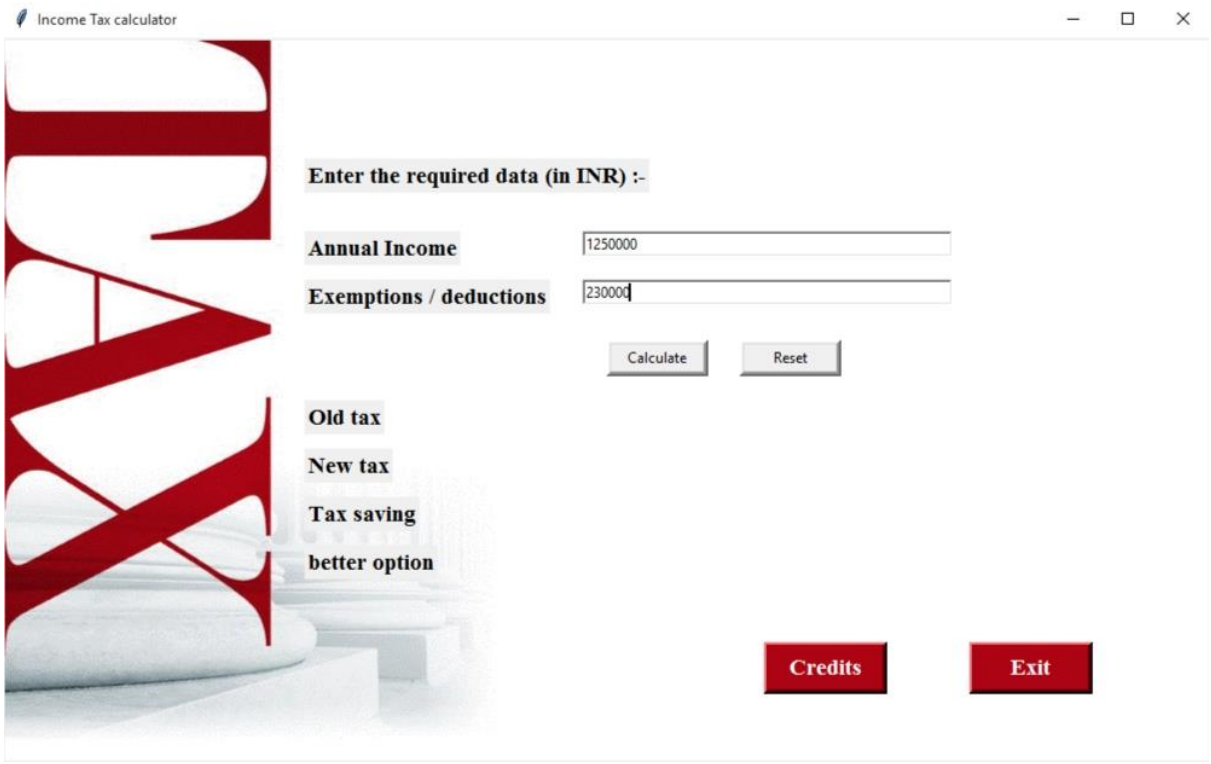
Output When Better Option Is New Tax



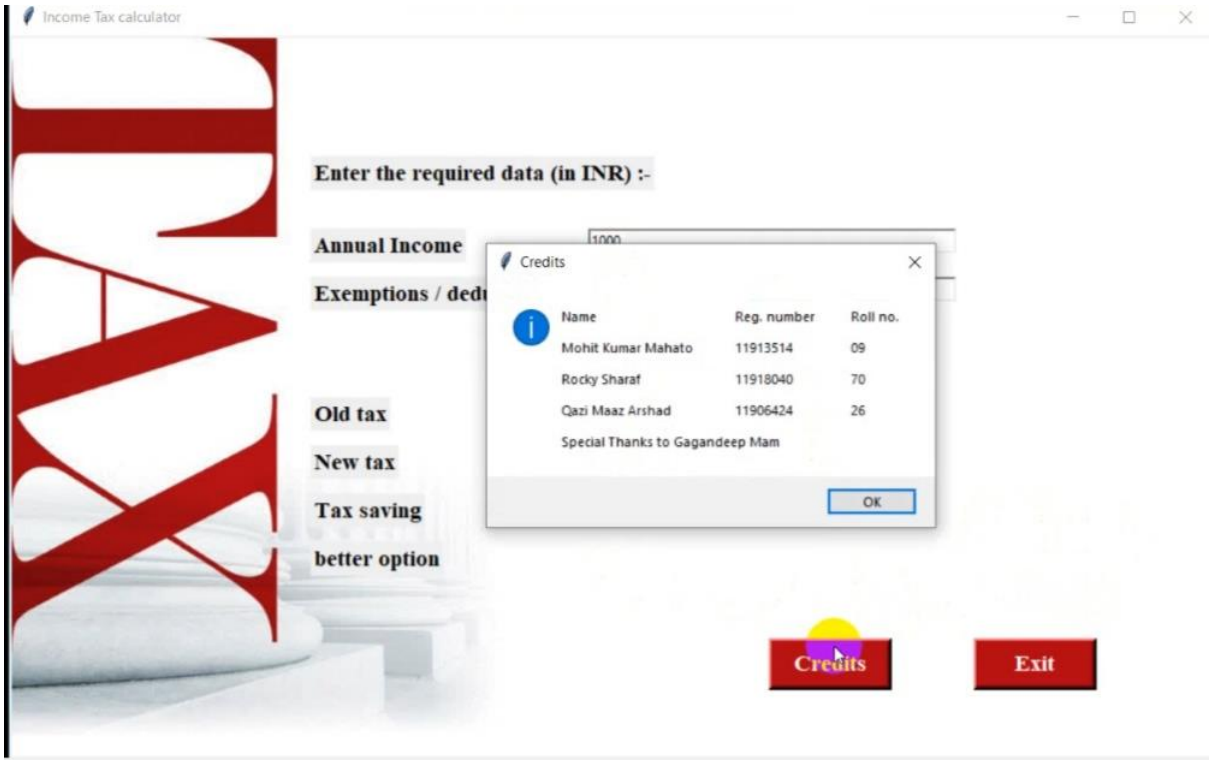
Output When Income Tax Is Not Applicable



Reset/Update



Credits



Source Code

```
#Importing tkinter package
from tkinter import *
#Importing messagebox widget from tkinter package
from tkinter import messagebox


root = Tk()                                  #Creating root window
root.title("Income Tax calculator")          #Root window title
root.geometry('1000x600')                    #Window size
root.maxsize(1000, 600)
font1 = ("Times", 14, "bold")                #Saving font styles
font2 = ("Times", 13, "bold")



def des_f1():                                #Destroys 1st frame f1
    f1.destroy()


#Creating 1st frame f1:-
```

```
f1 = Frame(root, height=600, width=1000)

f1.propagate(0)

f1.pack(side='top')

#Creating canvas on f1 for background image

c = Canvas(f1, width=1000, height=600, bg="blue")

c.pack()

p1 = PhotoImage(file='front.gif')          #Background image of f1

#Inserting image in canvas

c.create_image(0, 0, image=p1, anchor=NW)

#Creating button to move to next frame f2

Button(f1, text="Start", font=font1,
foreground='white',command=des_f1, bg='#8b1c13', width=8,
border=4).place(x=450,y=500)

def des_f2():                              #Function to destroy 2nd frame f2

   f2.destroy()


#Creating 2nd frame f2 :-

f2 = Frame(root, height=600, width=1000, background='red')

f2.propagate(0)

f2.pack(side='top')

#Creating canvas on f2 for background image
```

```
c = Canvas(f2, width=1000, height=600, bg="blue")
c.pack()
p2 = PhotoImage(file='back.gif')          #Background image of f2
#Inserting image in canvas
c.create_image(0, 0, image=p2, anchor=NW)
#Creating labels and entry boxes
l0 = Label(f2, text='Enter your details :-', font=font1)
l0.place(x=250, y=100)

l1 = Label(f2, text='Name', font=font1)
l1.place(x=250, y=140)
e1 = Entry(f2, width=50, border=2)
e1.place(x=450, y=140)

l2 = Label(f2, text='Contact', font=font1)
l2.place(x=250, y=180)
e2 = Entry(f2, width=50, border=2)
e2.place(x=450, y=180)

l3 = Label(f2, text='Email Id', font=font1)
```

```
l3.place(x=250, y=220)

e3 = Entry(f2, width=50, border=2)

e3.place(x=450, y=220)

#Button to move to 3rd frame f3 :-

Button(f2, text="Next", command=des_f2, width=10,
border=4).place(x=500, y=300)

#Function to display the new and old tax slab rates :-

def tax_scheme():

    new_window = Toplevel(f2)                #Creating new window

    new_window.title("Tax scheme")           #Window title

    new_window.geometry("452x322")           #window size

    Label(new_window, text="This is a Tax scheme",
image=logo).pack()

#Adding image having the new and old tax rates :-

logo = PhotoImage(file="image.gif")

label = Label(f2, text="This is the main window")

label.pack(pady=10)

#Button which shows the new and old tax rates in new window :-

Button(f2, text="Check Taxes Scheme",
command=tax_scheme).place(x=770, y=500)
```

```
def des_f3():              #Function to destroy 3rd frame f3
   f3.destroy()
#Creating the 3rd frame f3:-
f3 = Frame(root, height=600, width=1000, background='yellow')
f3.propagate(0)
f3.pack(side='top')
#Creating canvas on f3 for background image
c = Canvas(f3, width=1000, height=600, bg="blue")
c.pack()
p3 = PhotoImage(file='back.gif')          #Background image of f3
#Putting image in canvas of f3 :-
c.create_image(0, 0, image=p3, anchor=NW)
#Labels and entry boxes of 3rd frame f3 :-
l4 = Label(f3, text='Enter the required data (in INR) :-', font=font1)
l4.place(x=250, y=100)


l5 = Label(f3, text='Annual Income', font=font1)
l5.place(x=250, y=160)
e5 = Entry(f3, width=50, border=2)
e5.place(x=480, y=160)
```

```
l6 = Label(f3, text='Exemptions / deductions', font=font1)
l6.place(x=250, y=200)
e6 = Entry(f3, width=50, border=2)
e6.place(x=480, y=200)


def oldtax(ta):          #Function to calculate the tax as per old rates
    total = 0            #ta is the taxable amount=(income-deductions)
    n = 0
    while ta > 0:
        if n == 1:
            if ta >= 250000:
                total = total + 250000 * 5 / 100
            else:
                total = total + ta * 5 / 100
        elif n == 2 or n == 3:
            if ta >= 250000:
                total = total + 250000 * 20 / 100
            else:
```

```
            total = total + ta * 20 / 100
        elif n == 4 or n == 5:
            if ta >= 250000:
                total = total + 250000 * 30 / 100
            else:
                total = total + ta * 30 / 100
        elif n == 6:
            total = total + ta * 30 / 100
        else:
            total = 0
        ta = ta - 250000
        n = n + 1
    cess = total * 4 / 100              #CESS is the 4% of Total tax
    return total + cess          #Returning final tax = (Total tax + cess)


def newtax(ta):          #Function for calculating tax as per new rates
    total = 0            #ta is the annual income
    n = 0
    while ta > 0:
```

```
if n == 1:
    if ta >= 250000:
        total = total + 250000 * 5 / 100
    else:
        total = total + ta * 5 / 100
elif n == 2:
    if ta >= 250000:
        total = total + 250000 * 10 / 100
    else:
        total = total + ta * 10 / 100
elif n == 3:
    if ta >= 250000:
        total = total + 250000 * 15 / 100
    else:
        total = total + ta * 15 / 100
elif n == 4:
    if ta >= 250000:
        total = total + 250000 * 20 / 100
    else:
        total = total + ta * 20 / 100
```

```
        elif n == 5:
            if ta >= 250000:
                total = total + 250000 * 25 / 100
            else:
                total = total + ta * 25 / 100
        elif n == 6:
            total = total + ta * 30 / 100
        else:
            total = 0
        ta = ta - 250000
        n = n + 1
    cess = total * 4 / 100        #CESS is the 4% of Total tax
    return total + cess           #Returning final tax = (Total tax + cess)


def delete():                     #Function for clearing the output labels
    l8 = Label(f3, text="
",
               font=font1,
               background="white")
    l8.place(x=480, y=300)
```

```
    l10 = Label(f3, text="
",
                font=font1,
                background="white")
    l10.place(x=480, y=340)
    l12 = Label(f3, text="
",
                font=font1,
                background="white")
    l12.place(x=480, y=380)
    l14 = Label(f3, text="
",
                font=font1,
                background="white")
    l14.place(x=480, y=420)


delete()


#Function for calculating new and old tax by calling their functions:-
def calculate():
    delete()                    #Clears the previously calculated tax
```

```
    at = e5.get()                 #Retrieves annual income given by user
    ad = e6.get()                 #Retrieves annual deductions of user
    ta = int(at) - int(ad)        #Calculates taxable amount
    old = oldtax(ta)              #Calling function to calculate old tax
    new = newtax(int(at))         #Calling function to calculate new tax
    tax_save = abs(new - old)             #Calculates tax savings
    tax_save = round(tax_save, 2)         #Sets precision of tax saving
    if new > old:                 #Calculating which tax is cheaper
       better = "old tax"
    elif ta <= 250000:
       better = "Income tax not applicable (Taxable income < 250000)"
    else:
       better = "new tax"
#Printing the calculated old and new tax and tax savings :-
    l7 = Label(f3, text='Old tax', font=font1)
    l7.place(x=250, y=300)

    l8 = Label(f3, text=str(old), font=font1)
    l8.place(x=480, y=300)
```

```
l9 = Label(f3, text='New tax', font=font1)

l9.place(x=250, y=340)


l10 = Label(f3, text=str(new), font=font1)

l10.place(x=480, y=340)


l11 = Label(f3, text='Tax saving', font=font1)

l11.place(x=250, y=380)


l12 = Label(f3, text=str(tax_save), font=font1)

l12.place(x=480, y=380)


l13 = Label(f3, text='better option', font=font1)

l13.place(x=250, y=420)


l14 = Label(f3, text=better, font=font1)

l14.place(x=480, y=420)
```

```
#Button for calculating taxes for data given by the user

Button(f3, text="Calculate", command=calculate, width=10,
border=4).place(x=500, y=250)

#Button to reset the output labels for next calculation

Button(f3, text="Reset", command=delete, width=10,
border=4).place(x=610, y=250)


def credit():       #Function to print project credits in  a message box

    #Creating message box which will display the credits

    messagebox.showinfo('Credits',

                'Name\t\t\tReg. number\tRoll no.\n\nMohit Kumar
Mahato\t11913514\t09\n\n'

                'Rocky Sharaf\t\t11918040\t70\n\n'

                'Qazi Maaz Arshad\t\t11906424\t26 \n\n'

                'Special Thanks to Gagandeep Ma'am')

#Button for displaying project credits

Button(f3, text="Credits", command=credit, foreground='white',
font=font1, width=8, border=4, bg='#ad0414').place(x=630,y=500)


def end():          #Function for exiting the project

  root.destroy()
```

```
#Button for exiting the project

Button(f3, text="Exit", command=end, foreground='white', width=8,
font=font1, border=4, bg='#ad0414').place(x=800, y=500)


root.mainloop()                    #Method for starting the root window
```

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