```
from tkinter import *
import random
import time
import datetime

payroll = Tk()
payroll.geometry("1350x650+0+0")
payroll.title("Payroll Management System")

#============================DECLARING TEXT VARIABLES================================
EmployeeName =StringVar()
Address =StringVar()
Reference =StringVar()
EmployerName =StringVar()
CityWeighting =StringVar()
BasicSalary =StringVar()
OverTime =StringVar()
GrossPay =StringVar()
NetPay=StringVar()
Pension=StringVar()
StudentLoan=StringVar()
Attendance=StringVar()
Deductions=StringVar()
PostCode=StringVar()
Gender=StringVar()
PayDate=StringVar()
TaxPeriod=StringVar()
NICode=StringVar()
TaxablePay=StringVar()
PensionablePay=StringVar()
Tax=StringVar()

#==============================DESIGNING FRAME FOR TITLE============================
Tops=Frame(payroll,width=1350,height=50,bd=8, relief="raise")
Tops.pack(side=TOP)
LF=Frame(payroll,width=700,height=600,bd=16)
LF.pack(side=LEFT)
RF=Frame(payroll,width=700,height=600,bd=16)
RF.pack(side=RIGHT)

#=========================DESIGNING TITLE OF THE PROJECT============================
lblInfo = Label(Tops, font= ('arial', 50 ,'bold'), text="Payroll Management System",fg="Blue", bd=1)
lblInfo.grid(row=0,column=0)

#====================================DESIGNING FRAMES==============================
#---------------------------------------LEFT FRAME-----------------------------------------------------
LeftInsideLF=Frame(LF,width=700,height=100,bd=8, relief="raise")
LeftInsideLF.pack(side=TOP)
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LeftInsideLFLF=Frame(LF,width=325,height=400, bd=8, relief="raise")
LeftInsideLFLF.pack(side=LEFT)
LeftInsideRFRF=Frame(LF,width=325,height=400,bd=8, relief="raise")
LeftInsideRFRF.pack(side=RIGHT)
#----------------------------------------RIGHT FRAME-----------------------------------
RightInsideLF=Frame(RF,width=600,height=200,bd=8, relief="raise")
RightInsideLF.pack(side=TOP)
RightInsideLFLF=Frame(RF,width=300,height=400,bd=8, relief="raise")
RightInsideLFLF.pack(side=LEFT)
RightInsideRFRF=Frame(RF,width=300,height=400,bd=8, relief="raise")
RightInsideRFRF.pack(side=RIGHT)

#=======================================LEFT SIDE=========================
#-----------------------------------LEFT  SIDE TOP PART-------------------------------------------------
lblEmployeeName = Label(LeftInsideLF, font= ('arial', 15 ,'bold'), text="Employee Name",fg="Blue",
bd=10, anchor='w')
lblEmployeeName.grid(row=0,column=0)
txtEmployeeName =
Entry(LeftInsideLF,font=('arial',12,'bold'),bd=10,width=54,bg="yellow",textvariable=EmployeeName)
txtEmployeeName.grid(row=0,column=1)

lblAddress = Label(LeftInsideLF, font= ('arial', 15 ,'bold'), text="Address",fg="Blue", bd=10, anchor='w')
lblAddress.grid(row=1,column=0)
txtAddress = Entry(LeftInsideLF,font=('arial',12,'bold'),bd=10,width=54,bg="yellow"
                   ,textvariable=Address)
txtAddress.grid(row=1,column=1)

lblReference = Label(LeftInsideLF, font= ('arial', 15 ,'bold'), text="Reference ID",fg="Blue", bd=10,
anchor='w')
lblReference.grid(row=2,column=0)
txtReference = Entry(LeftInsideLF,font=('arial',12,'bold'),bd=10,width=54,bg="powder blue"
                     ,textvariable=Reference)
txtReference.grid(row=2,column=1)

lblEmployerName = Label(LeftInsideLF, font= ('arial', 15 ,'bold'), text="Employer Name",fg="Blue",
bd=10, anchor='w')
lblEmployerName.grid(row=3,column=0)
txtEmployerName = Entry(LeftInsideLF,font=('arial',12,'bold'),bd=10,width=54,bg="yellow"
                        ,textvariable=EmployerName)
txtEmployerName.grid(row=3,column=1)

#-----------------------------------LEFT SIDE INNER LEFT PART-------------------------------------------------
lblCity = Label(LeftInsideLFLF, font= ('arial', 15 ,'bold'), text="City Weighting",fg="Blue", bd=10,
anchor='w')
lblCity.grid(row=0,column=0)
txtCity = Entry(LeftInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="yellow"
                ,textvariable=CityWeighting)
txtCity.grid(row=0,column=1)
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lblBasicSalary= Label(LeftInsideLFLF, font= ('arial', 15 ,'bold'), text="Basic Salary",fg="Blue", bd=10,
anchor='w')
lblBasicSalary.grid(row=1,column=0)
txtBasicSalary = Entry(LeftInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="yellow"
                 ,textvariable=BasicSalary)
txtBasicSalary.grid(row=1,column=1)

lblOverTime= Label(LeftInsideLFLF, font= ('arial', 15 ,'bold'), text="Over Time",fg="Blue", bd=10,
anchor='w')
lblOverTime.grid(row=2,column=0)
txtOverTime = Entry(LeftInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="yellow"
               ,textvariable=OverTime)
txtOverTime.grid(row=2,column=1)

lblGrossPay= Label(LeftInsideLFLF, font= ('arial', 15 ,'bold'), text="Gross Pay",fg="Blue", bd=10,
anchor='w')
lblGrossPay.grid(row=3,column=0)
txtGrossPay = Entry(LeftInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
               ,textvariable=GrossPay)
txtGrossPay.grid(row=3,column=1)

lblNetPay= Label(LeftInsideLFLF, font= ('arial', 15 ,'bold'), text="Net Pay",fg="Blue", bd=10, anchor='w')
lblNetPay.grid(row=4,column=0)
txtNetPay = Entry(LeftInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
              ,textvariable=NetPay)
txtNetPay.grid(row=4,column=1)

#------------------------------LEFT SIDE INNER RIGHT PART-----------------------------------------------
lblTax = Label(LeftInsideRFRF, font= ('arial', 15 ,'bold'), text="Tax",fg="Blue", bd=10, anchor='w')
lblTax.grid(row=0,column=0)
txtTax = Entry(LeftInsideRFRF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
            ,textvariable=Tax)
txtTax.grid(row=0,column=1)

lblPension= Label(LeftInsideRFRF, font= ('arial', 15 ,'bold'), text="Pension",fg="Blue", bd=10, anchor='w')
lblPension.grid(row=1,column=0)
txtPension = Entry(LeftInsideRFRF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
               ,textvariable=Pension)
txtPension.grid(row=1,column=1)

lblStudentLoan= Label(LeftInsideRFRF, font= ('arial', 15 ,'bold'), text="Student Loan",fg="Blue", bd=10,
anchor='w')
lblStudentLoan.grid(row=2,column=0)
txtStudentLoan = Entry(LeftInsideRFRF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
                 ,textvariable=StudentLoan)
txtStudentLoan.grid(row=2,column=1)
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lblAttendance= Label(LeftInsideRFRF, font= ('arial', 15 ,'bold'), text="Attendance",fg="Blue", bd=10,
anchor='w')
lblAttendance.grid(row=3,column=0)
txtAttendance = Entry(LeftInsideRFRF,font=('arial',12,'bold'),bd=10,width=18,bg="yellow"
                ,textvariable=Attendance)
txtAttendance.grid(row=3,column=1)

lblDeductions= Label(LeftInsideRFRF, font= ('arial', 15 ,'bold'), text="Deductions",fg="Blue", bd=10,
anchor='w')
lblDeductions.grid(row=4,column=0)
txtDeductions = Entry(LeftInsideRFRF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
                ,textvariable=Deductions)
txtDeductions.grid(row=4,column=1)

#=========================================RIGHT SIDE======================
#----------------------------------RIGHT SIDE TOP PART-------------------------------------------------------
lblPostCode = Label(RightInsideLF, font= ('arial', 15 ,'bold'), text="Post Code",fg="Blue", bd=10,
anchor='w')
lblPostCode.grid(row=0,column=0)
txtPostCode =
Entry(RightInsideLF,font=('arial',12,'bold'),bd=10,width=40,bg="yellow",textvariable=PostCode)
txtPostCode.grid(row=0,column=1)

lblGender= Label(RightInsideLF, font= ('arial', 15 ,'bold'), text="Gender",fg="Blue", bd=10, anchor='w')
lblGender.grid(row=1,column=0)
txtGender =
Entry(RightInsideLF,font=('arial',12,'bold'),bd=10,width=40,bg="yellow",textvariable=Gender)
txtGender.grid(row=1,column=1)
#-------------------------------------RIGHT SIDE INNER LEFT PART-----------------------------------
lblPayDate = Label(RightInsideLFLF, font= ('arial', 15 ,'bold'), text="Pay Date",fg="Blue", bd=10,
anchor='w')
lblPayDate.grid(row=0,column=0)
txtPayDate = Entry(RightInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
,textvariable=PayDate)
txtPayDate.grid(row=0,column=1)

lblTaxPeriod = Label(RightInsideLFLF, font= ('arial', 15 ,'bold'), text="Tax Period",fg="Blue", bd=10,
anchor='w')
lblTaxPeriod.grid(row=1,column=0)
txtTaxPeriod = Entry(RightInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
,textvariable=TaxPeriod)
txtTaxPeriod.grid(row=1,column=1)

lblNICode = Label(RightInsideLFLF, font= ('arial', 15 ,'bold'), text="NI Code",fg="Blue", bd=10,
anchor='w')
lblNICode.grid(row=3,column=0)
txtNICode = Entry(RightInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
,textvariable=NICode)
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txtNICode.grid(row=3,column=1)

lblTaxablePay = Label(RightInsideLFLF, font= ('arial', 15 ,'bold'), text="Taxable Pay",fg="Blue", bd=10,
anchor='w')
lblTaxablePay.grid(row=4,column=0)
txtTaxablePay = Entry(RightInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder
blue",textvariable=TaxablePay)
txtTaxablePay.grid(row=4,column=1)

lblPensionablePay = Label(RightInsideLFLF, font= ('arial', 15 ,'bold'), text="Pensionable Pay",fg="Blue",
bd=10
                    ,anchor='w')
lblPensionablePay.grid(row=5,column=0)
txtPensionablePay = Entry(RightInsideLFLF,font=('arial',12,'bold'),bd=10,width=18,bg="powder blue"
                    ,textvariable=PensionablePay)
txtPensionablePay.grid(row=5,column=1)

#----------------------------------------------RIGHT SIDE INNER RIGHT PART-----------------------------------------

#-----------------------------------------BUTTONS FOR PROGRAM-----------------------------------------------
btnWagePayment=Button(RightInsideRFRF,pady=8,bd=8 ,fg="black", font=('arial', 12,'bold'),width=14,
                text="Wage Payment",
                bg="silver",command=MonthlySalary).grid(row=0,column=0)
btnReset=Button(RightInsideRFRF,pady=8,bd=8 ,fg="black", font=('arial', 12,'bold'),width=14,
                text="Reset",
                bg="silver",command=Reset).grid(row=1,column=0)
btnPayRef=Button(RightInsideRFRF,pady=8,bd=8 ,fg="black", font=('arial', 12,'bold'),width=14,
                text="Pay Reference",
                bg="silver",command=PayRef).grid(row=2,column=0)
btnPayCode=Button(RightInsideRFRF,pady=8,bd=8 ,fg="black", font=('arial', 12,'bold'),width=14,
                text="Pay Code",
                bg="silver",command=PayPeriod).grid(row=3,column=0)
btnExit=Button(RightInsideRFRF,pady=10,bd=8 ,fg="black", font=('arial', 12,'bold'),width=14,
                text="Exit",
                bg="red",command=Exit).grid(row=4,column=0)

#=========================COMMANDS OF BUTTONS===================================
def Exit():
   payroll.destroy()

def Reset():
   EmployeeName.set(" ")
   Address.set(" ")
   Reference.set(" ")
   EmployerName.set(" ")
   CityWeighting.set(" ")
   BasicSalary.set(" ")
   OverTime.set(" ")
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    GrossPay.set(" ")
    NetPay.set(" ")
    Pension.set(" ")
    StudentLoan.set(" ")
    Attendance.set(" ")
    Deductions.set(" ")
    PostCode.set(" ")
    Gender.set(" ")
    PayDate.set(" ")
    TaxPeriod.set(" ")
    NICode.set(" ")
    TaxablePay.set(" ")
    PensionablePay.set(" ")
    Tax.set(" ")


def PayRef():
    PayDate.set(time.strftime("%d/%m/%y"))
    Refpay=random.randint(20000, 70000)
    Refpaid= ("PR" + str(Refpay))
    Reference.set(Refpaid)

def PayPeriod():
    i = datetime.datetime.now()
    TaxPeriod.set(i.month)

    NCode = random.randint(3000,8000)
    ICode = ( "NIC" + str(NCode))
    NICode.set(ICode)

def MonthlySalary():
    BS = float(BasicSalary.get())
    CW = float(CityWeighting.get())
    OT = float(OverTime.get())
    AT = float(Attendance.get())
    MTax = ((BS + CW + OT + AT)* 0.013)
    TTax= "₹" , str('%.2f'%(MTax))
    Tax.set(TTax)

    MPension = ((BS + CW + OT + AT)* 0.04)
    APsn = "₹" , str('%.2f' %(MPension))
    Pension.set(APsn)

    MLoan=((BS + CW + OT + AT)* 0.015)
    ALn= "₹" , str('%.2f' %(MLoan))
    StudentLoan.set(ALn)

    Deduction = (MTax + MPension + MLoan )
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    Deduct = "₹", str('%.2f' % (Deduction))
    Deductions.set(Deduct)

    GPay = "₹", str('%.2f' % (BS + CW + OT + AT))
    GrossPay.set(GPay)

    Nett= (BS + CW + OT + AT) - Deduction
    NetAmnt= "₹" , str('%.2f' % (Nett))
    NetPay.set(NetAmnt)

    TaxablePay.set(TTax)
    PensionablePay.set(APsn)

payroll.mainloop()
```