Main.py

from tkinter import \*

from tkinter import ttk

from PIL import Image, ImageTk

from employee import Employee

class FaceRecognitionSystem:

    def \_\_init\_\_(self, root):

        self.root = root

        self.root.geometry("1530x790+0+0")

        self.root.title("ATTENDANCE MANAGEMENT SYSTEM")

        # Set background color

        self.root.configure(bg="thistle")

        # First Image

        img = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img = img.resize((500, 130), Image.BICUBIC)

        self.photoimg = ImageTk.PhotoImage(img)

        f\_lbl = Label(self.root, image=self.photoimg)

        f\_lbl.grid(row=0, column=0, padx=10, pady=10)

        # Second Image

        img1= Image.open(r"C:\Users\91639\OneDrive\Desktop\simple.png")

        img1 = img1.resize((500, 130), Image.BICUBIC)

        self.photoimg1 = ImageTk.PhotoImage(img1)

        f\_lbl = Label(self.root, image=self.photoimg1)

        f\_lbl.grid(row=0, column=1, padx=10, pady=10)

        # Third Image

        img2 = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img2 = img2.resize((500, 130), Image.BICUBIC)

        self.photoimg2 = ImageTk.PhotoImage(img2)

        f\_lbl = Label(self.root, image=self.photoimg2)

        f\_lbl.grid(row=0, column=2, padx=10, pady=10)

        title\_label = Label(self.root, text="FACE RECOGNITION ATTENDANCE SYSTEM", font=("times new roman", 35, "italic"), bg="white", fg="red")

        title\_label.grid(row=1, column=0, columnspan=3, pady=10)

        # Employee Management Button

        img3 = Image.open(r"C:\Users\91639\OneDrive\Desktop\download.jpg")

        img3 = img3.resize((220,220), Image.BICUBIC)

        self.photoimg3 = ImageTk.PhotoImage(img3)

        b1 = Button(self.root,image=self.photoimg3,command=self.employee\_details,cursor="star")

        b1.place(x=180,y=250,width=220,height=180)

        b1\_1 = Button(self.root,text=" Employee Details",command=self.employee\_details,cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b1\_1.place(x=182,y=435 ,width=220,height=40)

        # Face Detection

        img4 = Image.open(r"C:\Users\91639\OneDrive\Desktop\detector.jpg")

        img4 = img4.resize((220,220), Image.BICUBIC)

        self.photoimg4 = ImageTk.PhotoImage(img4)

        b2 = Button(self.root,image=self.photoimg3,cursor="star")

        b2.place(x=550,y=250,width=220,height=180)

        b2\_2 = Button(self.root,text="Face Detector",cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b2\_2.place(x=550,y=435 ,width=220,height=40)

        #Attendance Button

        img5 = Image.open(r"C:\Users\91639\OneDrive\Desktop\download.jpg")

        img5 = img5.resize((220,220), Image.BICUBIC)

        self.photoimg5= ImageTk.PhotoImage(img3)

        b1 = Button(self.root,image=self.photoimg5,cursor="star")

        b1.place(x=900,y=250,width=220,height=180)

        b1\_1 = Button(self.root,text=" Attendance",cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b1\_1.place(x=900,y=435 ,width=220,height=40)

        #Train Button

        img6 = Image.open(r"C:\Users\91639\OneDrive\Desktop\download.jpg")

        img6 = img6.resize((220,220), Image.BICUBIC)

        self.photoimg6 = ImageTk.PhotoImage(img6)

        b1 = Button(self.root,image=self.photoimg6,cursor="star")

        b1.place(x=180,y=530,width=220,height=180)

        b1\_1 = Button(self.root,text="Train Data",cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b1\_1.place(x=180,y=720 ,width=220,height=40)

        #Scan Face

        img7 = Image.open(r"C:\Users\91639\OneDrive\Desktop\download.jpg")

        img7 = img7.resize((220,220), Image.BICUBIC)

        self.photoimg7 = ImageTk.PhotoImage(img7)

        b1 = Button(self.root,image=self.photoimg7,cursor="star")

        b1.place(x=550,y=530,width=220,height=180)

        b1\_1 = Button(self.root,text=" Scan Face",cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b1\_1.place(x=550,y=720 ,width=220,height=40)

        #Exit

        img8= Image.open(r"C:\Users\91639\OneDrive\Desktop\download.jpg")

        img8 = img8.resize((220,220), Image.BICUBIC)

        self.photoimg8 = ImageTk.PhotoImage(img8)

        b1 = Button(self.root,image=self.photoimg8,cursor="star")

        b1.place(x=900,y=525,width=220,height=180)

        b1\_1 = Button(self.root,text=" Exit",cursor="spider",font=("times new roman", 20, "italic"), bg="white", fg="red")

        b1\_1.place(x=900,y=715 ,width=220,height=40)

    #Function button

    def employee\_details(self):

        self.new\_window =Toplevel(self.root)

        self.app =Employee(self.new\_window)

if \_\_name\_\_ == "\_\_main\_\_":

    root = Tk()

    obj = FaceRecognitionSystem(root)

    root.mainloop()

employee.py

from tkinter import \*

from tkinter import ttk

from PIL import Image, ImageTk

from tkinter import messagebox

class Employee :

    def \_\_init\_\_(self, root):

        self.root = root

        self.root.geometry("1530x790+0+0")

        self.root.title("ATTENDANCE MANAGEMENT SYSTEM")

        #Variable

        self.var\_department=StringVar()

        self.var\_position=StringVar()

        self.var\_year=StringVar()

        self.var\_shift=StringVar()

        self.var\_employee\_id =StringVar()

        self.var\_employee\_name=StringVar()

        self.var\_gender =StringVar()

        self.var\_product\_category=StringVar()

        self.var\_phone =StringVar()

        self.var\_email=StringVar()

        self.var\_address=StringVar()

        self.var\_verification\_id =StringVar()

         # Set background color

        self.root.configure(bg="thistle")

        # First Image

        img = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img = img.resize((500, 130), Image.BICUBIC)

        self.photoimg = ImageTk.PhotoImage(img)

        f\_lbl = Label(self.root, image=self.photoimg)

        f\_lbl.grid(row=0, column=0, padx=10, pady=10)

        # Second Image

        img1= Image.open(r"C:\Users\91639\OneDrive\Desktop\simple.png")

        img1 = img1.resize((500, 130), Image.BICUBIC)

        self.photoimg1 = ImageTk.PhotoImage(img1)

        f\_lbl = Label(self.root, image=self.photoimg1)

        f\_lbl.grid(row=0, column=1, padx=10, pady=10)

        # Third Image

        img2 = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img2 = img2.resize((500, 130), Image.BICUBIC)

        self.photoimg2 = ImageTk.PhotoImage(img2)

        f\_lbl = Label(self.root, image=self.photoimg2)

        f\_lbl.grid(row=0, column=2, padx=10, pady=10)

         # Set background color

        self.root.configure(bg="thistle")

        title\_label = Label(self.root, text="Employee Attendance", font=("times new roman", 35, "italic"), bg="white", fg="red")

        title\_label.grid(row=1, column=0, columnspan=3, pady=10)

     # Frame

        main\_frame = Frame(self.root,bd=2)

        main\_frame.place(x=6,y=230,width=15550,height=600)

    # Left Frame

        left\_frame = LabelFrame(main\_frame,bd=2,relief=RIDGE,text = "Employee Details",font=("times new roman",12,"bold" ))

        left\_frame.place(x=10,y=10,width = 710,height=535)

    # left Image

        img\_left  = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img\_left = img\_left.resize((500, 130), Image.BICUBIC)

        self.photoimg\_left = ImageTk.PhotoImage(img\_left)

        f\_lbl = Label(self.root, image=self.photoimg\_left)

        f\_lbl.place(x=70,y=270,width=600,height=130)

    #work Information

        current\_course\_frame = LabelFrame(left\_frame,bd=2,relief=RIDGE,text = "Work Details",font=("times new roman",12,"bold" ))

        current\_course\_frame.place(x=5,y=150,width = 680,height=105)

    #Department

        dep\_label = Label(current\_course\_frame, text ="Department",font=("times new roman",12,"bold"))

        dep\_label.grid(row=0,column =0,padx=10)

        dep\_combo = ttk.Combobox(current\_course\_frame,textvariable=self.var\_department,font=("times new roman",12,"bold"), state = "readonly",width = 17)

        dep\_combo["values"] =("Select Department","Finance and Accounting","Operations","Sales and Marketing","Customer Service","Research and Development","Administration","Project Management","Business Development")

        dep\_combo.current(0)

        dep\_combo.grid(row=0,column=1,padx =2,pady=10,sticky=W)

    #Position

        pos\_label = Label(current\_course\_frame, text ="Position",font=("times new roman",12,"bold"))

        pos\_label.grid(row=0,column =2,padx=10)

        pos\_combo = ttk.Combobox(current\_course\_frame,textvariable=self.var\_position,font=("times new roman",12,"bold"), state = "readonly",width = 17)

        pos\_combo["values"] =("Select Position","Chief Executive Officer","Chief Technology Office","Operations Manager","Sales Manager","Software Engineer/Developer","Administrative Assistant","Graphic Designer","Financial Analyst")

        pos\_combo.current(0)

        pos\_combo.grid(row=0,column=3,padx =2,pady=10,sticky=W)

    #Year

        ye\_label = Label(current\_course\_frame, text ="Year",font=("times new roman",12,"bold"))

        ye\_label.grid(row=1,column =0,padx=10)

        ye\_combo = ttk.Combobox(current\_course\_frame,textvariable=self.var\_year,font=("times new roman",12,"bold"), state = "readonly",width = 17)

        ye\_combo["values"] =("Select Year","2020-2021","2021-2022","2022-2023","2023-2024")

        ye\_combo.current(0)

        ye\_combo.grid(row=1,column=1,padx =2,pady=10,sticky=W)

    #Shift

        shi\_label = Label(current\_course\_frame, text ="Shift",font=("times new roman",12,"bold"))

        shi\_label.grid(row=1,column =2,padx=10)

        shi\_combo = ttk.Combobox(current\_course\_frame,textvariable=self.var\_shift,font=("times new roman",12,"bold"), state = "readonly",width = 17)

        shi\_combo["values"] =("Select Shift","Day","Night")

        shi\_combo.current(0)

        shi\_combo.grid(row=1,column=3,padx =2,pady=10,sticky=W)

    #Employee Information

        Employee\_course\_frame = LabelFrame(left\_frame,bd=2,relief=RIDGE,text = "Employee Details",font=("times new roman",12,"bold" ))

        Employee\_course\_frame.place(x=5,y=260,width = 680,height=180)

    #Employee\_ID

        Employee\_ID\_label = Label(Employee\_course\_frame, text ="Employee ID :",font=("times new roman",12,"bold"))

        Employee\_ID\_label.grid(row=0,column =0,padx=10,sticky=W)

        Employee\_ID\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_employee\_id,width=20,font=("times new roman",12,"bold"))

        Employee\_ID\_entry.grid(row = 0,column=2,padx=10,pady=5,sticky=W)

    #Employee Name

        Employee\_Name\_label = Label(Employee\_course\_frame, text ="Employee Name :",font=("times new roman",12,"bold"))

        Employee\_Name\_label.grid(row=0,column =3,pady=5,padx=10,sticky=W)

        Employee\_Name\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_employee\_name,width=20,font=("times new roman",12,"bold"))

        Employee\_Name\_entry.grid(row = 0,column=4,padx=10,pady=5,sticky=W)

    #Gender

        Gender\_label = Label(Employee\_course\_frame, text ="Gender :",font=("times new roman",12,"bold"))

        Gender\_label.grid(row=1,column =0,pady=5,padx=10,sticky=W)

        Gender\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_gender,width=20,font=("times new roman",12,"bold"))

        Gender\_entry.grid(row = 1,column=2,padx=10,pady=5,sticky=W)

    #Product Category

        Product\_label = Label(Employee\_course\_frame, text ="Product Category :",font=("times new roman",12,"bold"))

        Product\_label.grid(row=1,column =3,pady=5,padx=10,sticky=W)

        Product\_entry  = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_product\_category,width=20,font=("times new roman",12,"bold"))

        Product\_entry.grid(row = 1,column=4,padx=10,pady=5,sticky=W)

    #Phone

        Phone\_label= Label(Employee\_course\_frame, text ="Phone Number :",font=("times new roman",12,"bold"))

        Phone\_label.grid(row=2,column =0,pady=5,padx=10,sticky=W)

        Phone\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_phone,width=20,font=("times new roman",12,"bold"))

        Phone\_entry.grid(row = 2,column=2,padx=10,pady=5,sticky=W)

    #Email

        Email\_label = Label(Employee\_course\_frame, text ="Email :",font=("times new roman",12,"bold"))

        Email\_label.grid(row=2,column =3,pady=5,padx=10,sticky=W)

        Email\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_email,width=20,font=("times new roman",12,"bold"))

        Email\_entry.grid(row = 2,column=4,padx=10,pady=5,sticky=W)

    #Address

        Address\_label = Label(Employee\_course\_frame, text ="Address :",font=("times new roman",12,"bold"))

        Address\_label.grid(row=3,column =0,pady=5,padx=10,sticky=W)

        Address\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_address,width=20,font=("times new roman",12,"bold"))

        Address\_entry.grid(row = 3,column=2,padx=10,pady=5,sticky=W)

    #Verification\_ID

        Verification\_label = Label(Employee\_course\_frame, text ="Verification ID :",font=("times new roman",12,"bold"))

        Verification\_label.grid(row=3,column =3,pady=5,padx=10,sticky=W)

        Verification\_entry = ttk.Entry(Employee\_course\_frame,textvariable=self.var\_verification\_id,width=20,font=("times new roman",12,"bold"))

        Verification\_entry.grid(row = 3,column=4,padx=10,pady=5,sticky=W)

    #Radio\_Button

    #Button\_Frame

        # Button\_Frame

        btn\_frame = Frame(left\_frame, bd=2, relief=RIDGE,bg="white")

        btn\_frame.place(x=5, y=450, width=685, height=37)

        save\_btn = Button(btn\_frame, text="Save", command=self.add\_data,width=16, font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        save\_btn.grid(row=0, column=0)

        update\_btn = Button(btn\_frame, text="Take Photo Sample", width=16,  font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        update\_btn.grid(row=0, column=1)

        delete\_btn = Button(btn\_frame, text="Update Photo Sample", width=16, font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        delete\_btn.grid(row=0, column=2)

        reset\_btn = Button(btn\_frame, text="Reset", width=16,  font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        reset\_btn.grid(row=0, column=3)

    # Right Frame

        Right\_frame = LabelFrame(main\_frame,bd=2,relief=RIDGE,text = "Employee Details",font=("times new roman",12,"bold" ))

        Right\_frame.place(x=775,y=10,width=740,height=535)

    #Right Image

        img\_right  = Image.open(r"C:\Users\91639\OneDrive\Desktop\attendance system.png")

        img\_right = img\_left.resize((500, 130), Image.BICUBIC)

        self.photoimg\_right = ImageTk.PhotoImage(img\_right)

        f\_lbl = Label(self.root, image=self.photoimg\_right)

        f\_lbl.place(x=840,y=270,width=600,height=130)

        #Search System

        Search\_frame = LabelFrame(Right\_frame,bd=2,relief=RIDGE,text = "Search System",font=("times new roman",12,"bold" ))

        Search\_frame.place(x=5,y=140,width = 730,height=70)

        search\_label= Label(Search\_frame, text =" Search By:",font=("times new roman",13,"bold"))

        search\_label.grid(row=0,column =0,pady=5,padx=10,sticky=W)

        search\_combo = ttk.Combobox(Search\_frame,font=("times new roman",12,"bold"), state = "readonly",width = 17)

        search\_combo["values"] =("Select","Employee ID","Employee Name","Email")

        search\_combo.current(0)

        search\_combo.grid(row=0,column=1,padx =2,pady=10,sticky=W)

        search\_entry = ttk.Entry(Search\_frame,width=20,font=("times new roman",12,"bold"))

        search\_entry.grid(row =0,column=2,padx=10,pady=5,sticky=W)

        search\_btn = Button(Search\_frame, text="Search", width=12, font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        search\_btn.grid(row=0, column=3,padx=2)

        show\_btn = Button(Search\_frame, text="Show All", width=12,  font=("times new roman", 13, "bold"), bg="light coral", fg="white")

        show\_btn.grid(row=0, column=4,padx=2)

        #Table Frame

        table\_frame = Frame(Right\_frame,bd=2,relief=RIDGE)

        table\_frame.place(x=5,y=220,width = 720,height=290)

        scroll\_x = ttk.Scrollbar(table\_frame,orient=HORIZONTAL)

        scroll\_y = ttk.Scrollbar(table\_frame,orient=VERTICAL)

        self.employee\_table = ttk.Treeview(table\_frame,column=("Employee\_ID","Employee\_Name","Gender","Product Category","Phone","Email","Address","Verification\_ID"),xscrollcommand=scroll\_x.set,yscrollcommand=scroll\_y.set)

        scroll\_x.pack(side=BOTTOM,fill=X)

        scroll\_y.pack(side=RIGHT,fill=Y)

        scroll\_x.config(command=self.employee\_table.xview)

        scroll\_y.config(command=self.employee\_table.yview)

        self.employee\_table["columns"] = ("Employee\_ID", "Employee\_Name", "Gender", "Product\_Category", "Phone", "Email", "Address", "Verification\_ID")

        self.employee\_table.column("#0", width=80)  # Adding a column for treeview hierarchy

        self.employee\_table.column("Employee\_ID", width=100)

        self.employee\_table.column("Employee\_Name", width=150)

        self.employee\_table.column("Gender", width=80)

        self.employee\_table.column("Product\_Category", width=150)

        self.employee\_table.column("Phone", width=120)

        self.employee\_table.column("Email", width=200)

        self.employee\_table.column("Address", width=200)

        self.employee\_table.column("Verification\_ID", width=120)

        self.employee\_table.heading("#0", text="ID")

        self.employee\_table.heading("Employee\_ID", text="Employee ID")

        self.employee\_table.heading("Employee\_Name", text="Employee Name")

        self.employee\_table.heading("Gender", text="Gender")

        self.employee\_table.heading("Product\_Category", text="Product Category")

        self.employee\_table.heading("Phone", text="Phone")

        self.employee\_table.heading("Email", text="Email")

        self.employee\_table.heading("Address", text="Address")

        self.employee\_table.heading("Verification\_ID", text="Verification ID")

        self.employee\_table["show"] = "headings"

        self.employee\_table.pack(fill=BOTH,expand=1)

#Function Decration

    def add\_data(self):

      if self.var\_department.get=="Select Department" or self.var\_employee\_name.get() ==" "or self.var\_employee\_id.get()=="":

        messagebox.showerror("Error","All fields Required",parent =self.root)

      else:

        pass

if \_\_name\_\_ == "\_\_main\_\_":

    root = Tk()

    obj = Employee(root)

    root.mainloop()