ONLINE EMPLOYEE PAYROLL MANAGEMENT SYSTEM

REPORT OF A PROJECT SUBMITTED FOR
COMPULSORY CLASS ASSIGNMENT FOR THE COURSE
PYTHON PROGRAMMING -- INT 213

PRAKASH KUMAR
Reg. no.—12018946
Roll No. --- RK20UFA21
MALAPATI VENKATA SIVA REDDY
Reg. no.—12018514
Roll No. --- RK20UFB62
SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

Under Supervision of
Asst. Prof. UPINDER KAUR
Department of Computer Science and Engineering

LOVELY PROFESSIONAL UNIVERSITY
Jalandhar-Delhi, G.T. Road, Phagwara, Punjab (INDIA) 144411
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ACKNOWLEDGEMENT

We express our sincere gratitude to our university **Lovely Professional University, Punjab** for providing us this great opportunity to undertake and complete such an interesting project report on **Online Employee Payroll Management system** using **Python Programming**.

We are very grateful to our respected faculty, **Ms. Upinder Kaur** whose guidance and constructive suggestions throughout the project has resulted in a successful completion of this project. Without her assistance we wouldn't have completed this project within such a short period of time.

It would be really unfair without the mention of our friends and families especially our elder brothers who are from IT Background and they have a huge contribution in completion of this project, other than that the immense love and moral support of both the families is truly unmeasurable.

Date : 18th November 2021

PRAKASH KUMAR
Reg. no.—12018946
MALAPATI VENKATA SIVA REDDY
Reg. no.—12018514
B. Tech (CSE) – 3rd Semester, LPU

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INTRODUCTION

Online Employee Payroll Management System is a very simple, flexible, and user-friendly Management Software. It takes care of all the requirement relating to accounting and management of employees. Payroll System stores complete record of employees, generates Salary Receipt and attendance Register, compute all Allowances and deductions, and generate all statutory reports.

Payroll is only salary processing software with good and wide-industry range of clients. It offers very high flexibility in defining various allowances, deductions, leave rules etc. for the employees and all formula for P.F, Income Tax etc. are definable and changeable at User's end.

This Payroll Software is designed to avoid errors while entering data. It also provides error message while entering invalid data. It is user-friendly as no formal knowledge is required to use the system.

Human resource challenges are faced by every organization which has to be overcome by the organization. Every organization has different employee and payroll management needs. Therefore we have design exclusive Employee and payroll Management System that are adapted to the organization's Managerial Requirements.

OBJECTIVE:

These are the multiple objectives behind designing and implementation of this project:

(1) To prepare the detailed salary record of all the employees in an organization.

(2) To generate salary receipt after calculation of salary based on number of days an employee was present and few other factors.

(3) To reduce ample efforts required to maintain records on paper and keep it safe as it makes a little easy to keep record online.

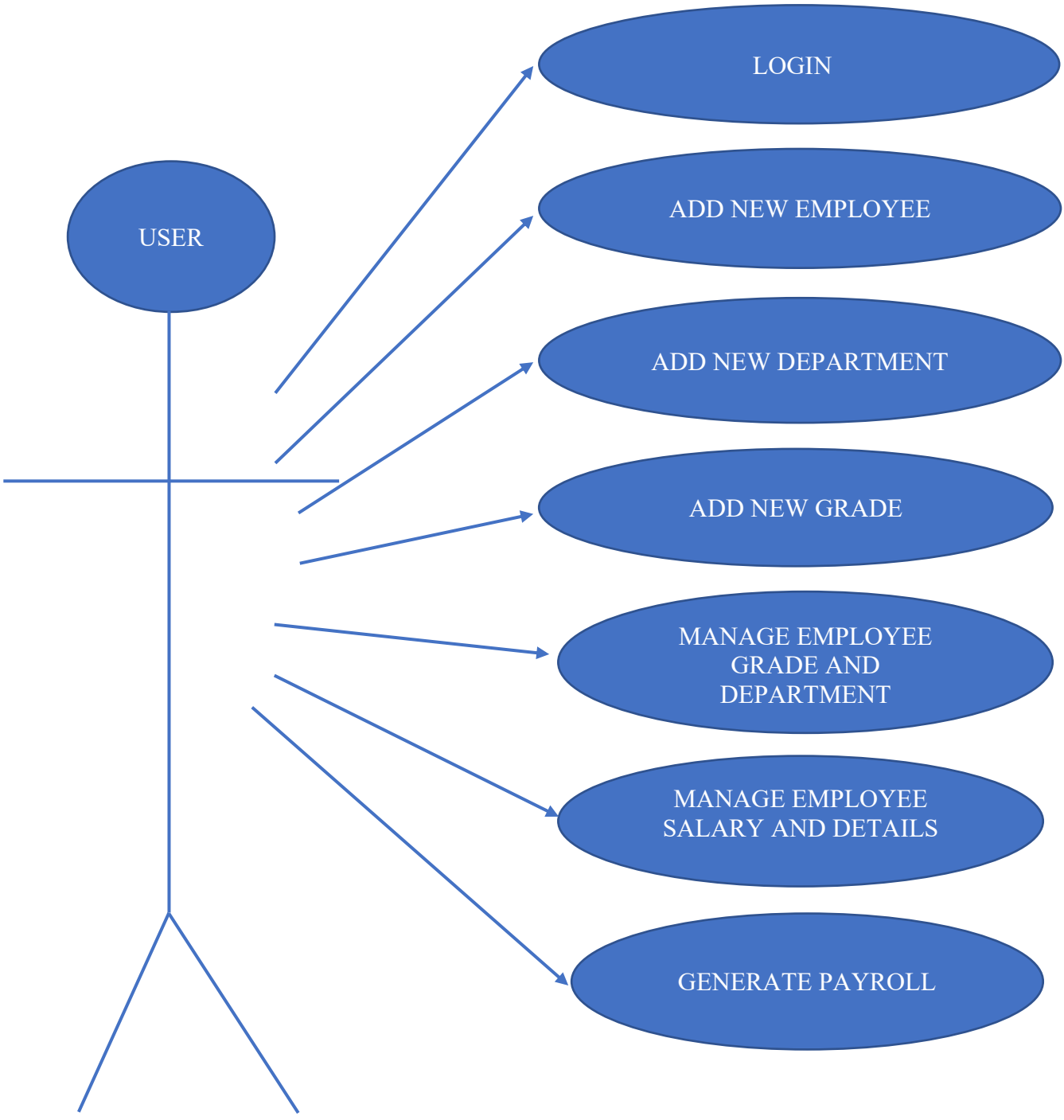
(4) To maintain Allowances, Deductions, Loans, and many other details for an employee.

(5) Proper usage of manpower as it will help an organization from hiring multiple employees for management of payroll on paper instead on online, they can do this job with a smaller number of employees.

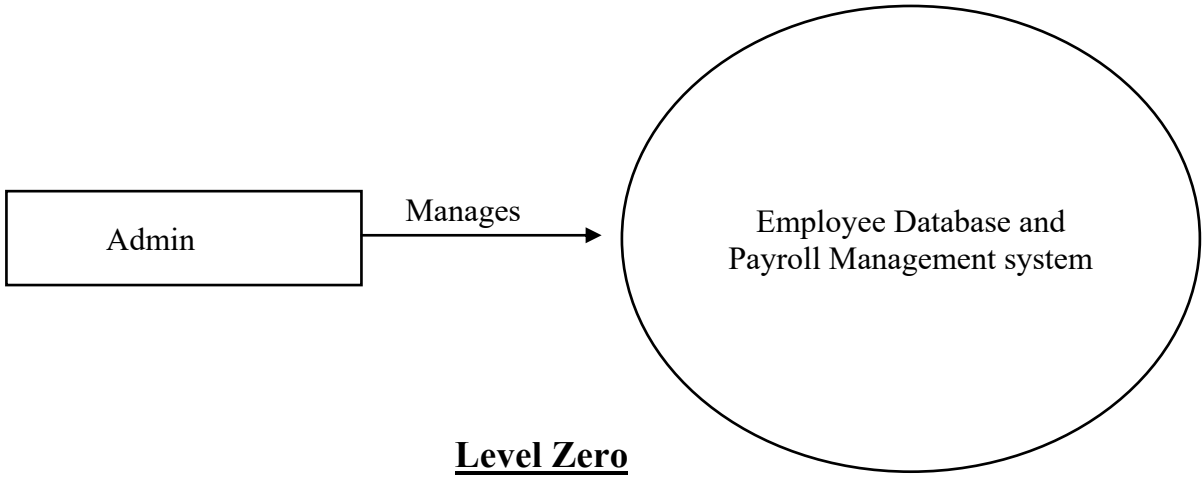
(6) To generate reports in user-defined format so that an employee can easily understand the terminology behind calculation of net salary.

(7) To generate various important reports that provides valuable information to top-level management and also to the other department of the organization.

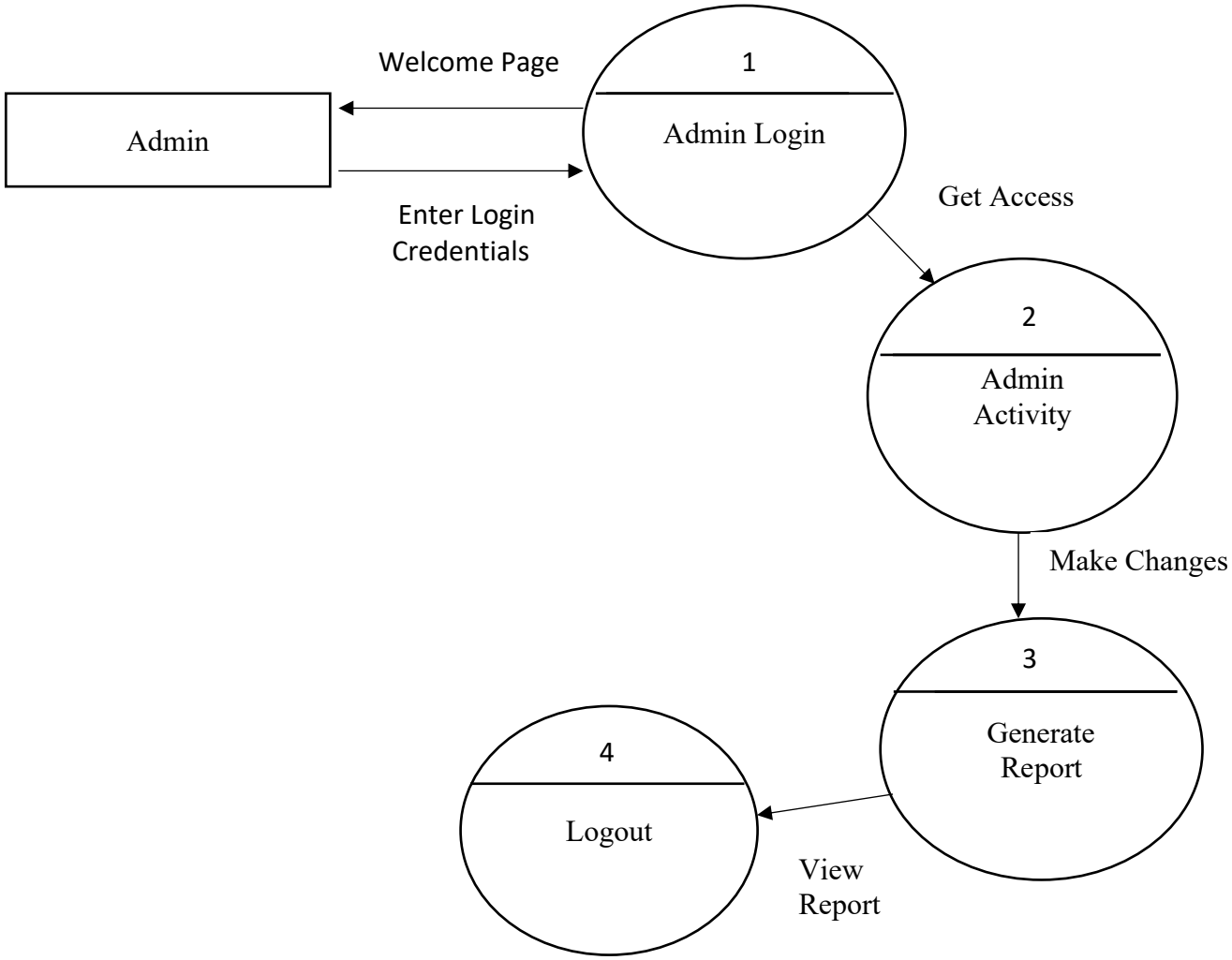
Use Case Diagram:



DFD – Data Flow Diagram



Level Zero



Level One

Team Member with Roles:

Team Member 1:

PRAKASH KUMAR
Reg. no.—12018946

Contributions: -

(1) Equal Contribution in Writing Project Report.

(2) Equal Contribution in Research work for completion of this project.

(3) Employee Salary Details.

(4) Calculator.

(5) Salary Receipt.

Team Member 2:

MALAPATI VENKATA SIVA REDDY
Reg. no.—12018514

Contributions: -

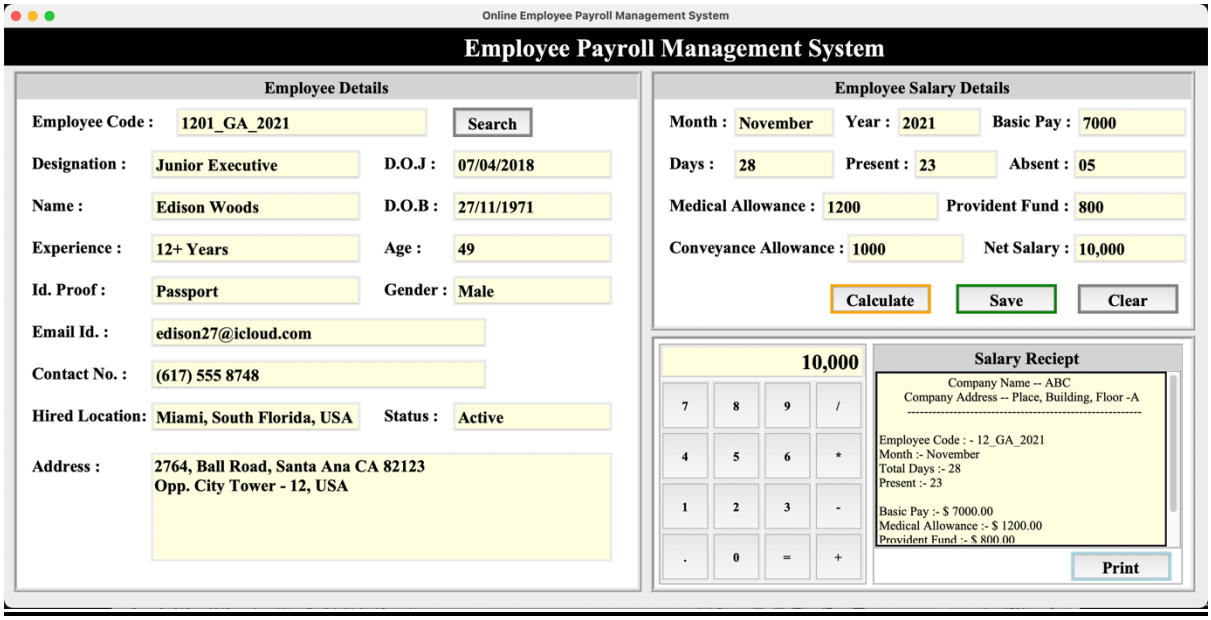
(1) Equal Contribution in Writing Project Report.

(2) Equal Contribution in Research work for completion of this project.

(3) Employee Details.

Online Employee Payroll Management System

Screenshots of Output:



Screenshots of Codes:

```
from tkinter import *
|
payroll=Tk()
payroll.title("Online Employee Payroll Management System")
payroll.geometry("1435x690+0+0")
label=Label(payroll,text="Employee Payroll Management System", font=("times new roman",30,"bold"),bg="black",fg="white").place(height=45, width=1600)
```

```
#-------------------------------------------    FRAME 1    ---------------------------------------------------------------------------------------------------

#Frame 1 (Employee Details)
Frame1=Frame(payroll,bg="white",bd=5,relief=RIDGE)
Frame1.place(x=10,y=50,height=621,width=750)
title1=Label(Frame1,text=" Employee Details ", font=("times new roman",20,"bold"),bg="lightgray",fg="black").place(height=30, width=740)

# Frame 1_Row 1 (Employee Code)
label_code=Label(Frame1,text=" Employee Code : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=40)
txt_code=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=190, y=40, width=300)
btn_search=Button(Frame1,text="Search", font=("times new roman",20,"bold"),highlightbackground='gray',bg = "gray",fg = "black").place(x=520,y=40)

# Frame 1_Row 2 (Designation and Date of Joining)
label_Designation=Label(Frame1,text=" Designation : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=90)
txt_Designation=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=90, width=250)
label_DOJ=Label(Frame1,text=" D.O.J : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=430, y=90)
txt_DOJ=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=520, y=90, width=190)

# Frame 1_Row 3 (Name and Date of Birth)
label_Name=Label(Frame1,text=" Name : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=140)
txt_Name=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=140, width=250)
label_DOB=Label(Frame1,text=" D.O.B : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=430, y=140)
txt_DOB=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=520, y=140, width=190)

# Frame 1_Row 4 (Experience and Age)
label_Experience=Label(Frame1,text=" Experience : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=190)
txt_Experience=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=190, width=250)
label_Age=Label(Frame1,text=" Age : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=430, y=190)
txt_Age=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=520, y=190, width=190)

# Frame 1_Row 5 (Proof of ID and Gender)
label_ID_Proof=Label(Frame1,text=" Id. Proof : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=240)
txt_ID_Proof=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=240, width=250)
label_Age=Label(Frame1,text=" Gender : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=430, y=240)
txt_Age=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=520, y=240, width=190)

# Frame 1_Row 6 (Email Id.)
label_Email=Label(Frame1,text=" Email Id. : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=290)
txt_Email=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=290, width=400)

#Frame 1_Row 7 (Contact Number)
label_Contact=Label(Frame1,text=" Contact No. : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=340)
txt_Contact=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=340, width=400)

# Frame 1_Row 8 (Hired Location and Current Status)
label_Hired_Loc=Label(Frame1,text=" Hired Location: ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=390)
txt_Hired_Loc=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=160, y=390, width=250)
label_Status=Label(Frame1,text=" Status : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=430, y=390)
txt_Status=Entry(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black").place(x=520, y=390, width=190)

# Frame 1_Row 9 (Address of Employee)
label_Address=Label(Frame1,text=" Address : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=450)
txt_Address=Text(Frame1,font=("times new roman",20,"bold"),bg="LIGHTYELLOW",fg="black")
txt_Address.place(x=160, y=450, height=130,width=550)
```

```
#-------------------------------------  FRAME 2  ---------------------------------------------------------------------------------------------------------

#Frame 2 (Employee Salary Details)
Frame2=Frame(payroll,bg="white",bd=5,relief=RIDGE)
Frame2.place(x=770,y=50,height=310,width=650)
title2=Label(Frame2,text="Employee Salary Details", font=("times new roman",20,"bold"),bg="lightgray",fg="black").place(height=30, width=640)

# Frame 2_Row 1 (Month , Year and Basic Pay)
label_Month=Label(Frame2,text=" Month : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=40)
txt_Month=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=95, y=40, width=120)
label_Year=Label(Frame2,text=" Year : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=220, y=40)
txt_Year=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=290, y=40, width=100)
label_Basic_Pay=Label(Frame2,text=" Basic Pay : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=395, y=40)
txt_Basic_Pay=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=505, y=40, width=130)

# Frame 2_Row 2 (Total Number of Days, Number of days Present and Number of Days Absent)
label_Days=Label(Frame2,text=" Days : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=90)
txt_Days=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=95, y=90, width=120)
label_Present=Label(Frame2,text=" Present : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=220, y=90)
txt_Present=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=310, y=90, width=100)
label_Absent=Label(Frame2,text=" Absent : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=415, y=90)
txt_Absent=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=500, y=90, width=135)

# Frame 2_Row 3 (Medical Allowance and Provident Fund)
label_Medical_Allowance=Label(Frame2,text=" Medical Allowance : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=140)
txt_Medical_Allowance=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=200, y=140, width=140)
label_Provident_Fund=Label(Frame2,text=" Provident Fund : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=340, y=140)
txt_Provident_Fund=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=500, y=140, width=135)

# Frame 2_Row 4 (Conveyance Allowance and Net Salary)
label_Conveyance_Allowance=Label(Frame2,text=" Conveyance Allowance : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=10, y=190)
txt_Conveyance_Allowance=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=230, y=190, width=140)
label_Net_Salary=Label(Frame2,text=" Net Salary : ", font=("times new roman",20,"bold"),bg="white",fg="black").place(x=385, y=190)
txt_Net_Salary=Entry(Frame2,font=("times new roman",20,"bold"),bg="lightyellow",fg="black").place(x=500, y=190, width=135)

# Frame 2_Row 5 (Calculate Button, Save Button and Clear Button)
btn_Calculate=Button(Frame2,text="Calculate", font=("times new roman",20,"bold"),highlightbackground= "orange",bg='orange',fg = "black").place(x=210,y=250, width=120)
btn_Save=Button(Frame2,text="Save", font=("times new roman",20,"bold"),highlightbackground='green',bg = "#000fff000",fg = "black").place(x=360,y=250, width=120)
btn_Clear=Button(Frame2,text="Clear", font=("times new roman",20,"bold"),highlightbackground='gray',bg = "gray",fg = "black").place(x=505,y=250, width=120 )
```

```
#----------------------------------------  FRAME 3  ------------------------------------------------------------------------------------------------------

#Frame 3 ()
Frame3=Frame(payroll,bg="white",bd=5,relief=RIDGE)
Frame3.place(x=770,y=365,height=306,width=650)

#Frame 3_(Calculator)
Cal_Frame=Frame(Frame3, bg="white",bd=2,relief=RIDGE)
Cal_Frame.place(x=5,y=5,width=248,height=287)

txt_Result=Entry(Cal_Frame,bg='lightyellow',font=('times new roman',25,'bold')).place(x=0,y=0,relwidth=1,height=40)

btn_7=Button(Cal_Frame,text='7',command=lambda:btn_click(7),font=('times new roman',15,'bold')).place(x=0,y=42,width=60,height=60)
btn_8=Button(Cal_Frame,text='8',command=lambda:btn_click(8),font=('times new roman',15,'bold')).place(x=61,y=42,width=60,height=60)
btn_9=Button(Cal_Frame,text='9',command=lambda:btn_click(9),font=('times new roman',15,'bold')).place(x=122,y=42,width=60,height=60)
btn_divide=Button(Cal_Frame,text='/',command=lambda:btn_click('/'),font=('times new roman',15,'bold')).place(x=183,y=42,width=60,height=60)

btn_4=Button(Cal_Frame,text='4',command=lambda:btn_click(4),font=('times new roman',15,'bold')).place(x=0,y=102,width=60,height=60)
btn_5=Button(Cal_Frame,text='5',command=lambda:btn_click(5),font=('times new roman',15,'bold')).place(x=61,y=102,width=60,height=60)
btn_6=Button(Cal_Frame,text='6',command=lambda:btn_click(6),font=('times new roman',15,'bold')).place(x=122,y=102,width=60,height=60)
btn_multiply=Button(Cal_Frame,text='*',command=lambda:btn_click('*'),font=('times new roman',15,'bold')).place(x=183,y=102,width=60,height=60)

btn_1=Button(Cal_Frame,text='1',command=lambda:btn_click(1),font=('times new roman',15,'bold')).place(x=0,y=162,width=60,height=60)
btn_2=Button(Cal_Frame,text='2',command=lambda:btn_click(2),font=('times new roman',15,'bold')).place(x=61,y=162,width=60,height=60)
btn_3=Button(Cal_Frame,text='3',command=lambda:btn_click(3),font=('times new roman',15,'bold')).place(x=122,y=162,width=60,height=60)
btn_subtract=Button(Cal_Frame,text='-',command=lambda:btn_click('-'),font=('times new roman',15,'bold')).place(x=183,y=162,width=60,height=60)

btn_point=Button(Cal_Frame,text='.',command=lambda:btn_click('.'),font=('times new roman',15,'bold')).place(x=0,y=222,width=60,height=60)
btn_0=Button(Cal_Frame,text='0',command=lambda:btn_click(0),font=('times new roman',15,'bold')).place(x=61,y=222,width=60,height=60)
btn_equal_to=Button(Cal_Frame,text='=',command=lambda:btn_click('='),font=('times new roman',15,'bold')).place(x=122,y=222,width=60,height=60)
btn_add=Button(Cal_Frame,text='+',command=lambda:btn_click('+'),font=('times new roman',15,'bold')).place(x=183,y=222,width=60,height=60)

#Frame 3_(Salary)
Sal_Frame1=Frame(Frame3, bg="white",bd=2,relief=RIDGE)
Sal_Frame1.place(x=260,y=5,width=370,height=287)
title_Sal=Label(Sal_Frame1,text="Salary Reciept", font=("times new roman",20,"bold"),bg="lightgray",fg="black").place(height=30, width=366)

Sal_Frame2=Frame(Sal_Frame1,bg='white',bd=2,relief=RIDGE)
Sal_Frame2.place(x=0,y=30,relwidth=1,height=212)

scroll_y=Scrollbar(Sal_Frame2,orient=VERTICAL)
scroll_y.pack(fill=Y,side=RIGHT)

txt_Salary_recipt=Text(Sal_Frame2,font=('times new roman',15),bg='lightyellow',yscrollcommand=scroll_y.set)
txt_Salary_recipt.pack(fill=BOTH,expand=1)
scroll_y.config(command=txt_Salary_recipt.yview)

btn_Print=Button(Sal_Frame1,text="Print", font=("times new roman",20,"bold"),highlightbackground= "lightblue",bg='white',fg = "black").place(x=235,y=246, width=120)

payroll.mainloop()
```

Future scope of the Project:

(1) We would like to add regular data backup technique to avoid any data loss due to accident or failure.

(2) We would like make payment scale more detailed by adding more rows like – Dearness Allowance, Insurance, Tax Calculation and etc.

(3) We would like to add rows for "Over Time" and develop a technique so that the amount to be paid for over time is automatically calculated based on Biometric attendance.

(4) This software system can be developed in such a way that we can modify the existing feature and make it more user friendly.

(5) We would like to connect our software system to a proper database so that the record of new employee or the existing employee can be added and modified at any time as well as admin can fetch the details of any employee at any time.

Conclusion:

This project is built keeping in mind that it is to be used by only one user that is the admin. It is built for use in small scale organization where the number of employees is limited. According to the requested requirement the admin can search and fetch data of all employee in his organization also he/she can calculate the salary for a particular month using calculator and can be able to print salary receipt. Numerous validations implemented would enable the admin to enter accurate data and make correction in any incorrect or wrongly inputted data. The main objective behind development of this project is to save time and make the system cost effective also make management of data efficient.

References:

To conduct this project we used IDLE shell 3.10.0 by www.python.org

Websites:

- https://www.wikipedia.org/
- https://www.youtube.com/
- https://www.geeksforgeeks.org/
- https://www.w3schools.com/
- https://www.tutorialspoint.com/index.htm

GitHub Link:

- https://github.com/sivadamini/employee-playroll-management-system