THE BRIGADE SCHOOL@ JP NAGAR



PROJECT
IN
COMPUTER SCIENCE (083)

AQUAVANQ PAYROLL MANAGEMENT SYSTEM

Name:…….Kanishk K……

Class:……..XII ……

Reg No:……..

THE BRIGADE SCHOOL
JP NAGAR BENGALURU



BONA FIDE CERTIFICATE

This is to certify that this project report entitled *AQUAVANQ PAYROLL MANAGEMENT SYSTEM* is a bona fide record of the project work done by Kanishk Krishnamurthy Of class XII Reg.No……. in the academic year 2022-23. This Project has been submitted in partial fulfillment of AISSCE for practical held at The Brigade School @ JP Nagar Bengaluru on ……

_____ _____

Internal Examiner **External Examiner**

School Stamp

_____

Principal

Acknowledgement

"It is not possible to complete a project without assistance and encouragement of other people. This one is no exception"

The success and final outcome of this project required a lot of guidance and assistance from many people and I am extremely fortunate to have got them all along to have my project completed. Whatever I have done is due to such guidance and assistance and I would not forget to thank them.

I would like to thank the principal, Ms Stella Parthasarathy, for being a constant source of support and encouragement.

I take this opportunity to express my profound gratitude and deep regards to my teacher Mrs. Divya Vikranth for her exemplary guidance, monitoring and constant encouragement throughout the course of this project. Without your active guidance, cooperation, help and encouragement, I would not have made a head way in the project.

I extend my gratitude to The Brigade School@ J P Nagar for giving me this opportunity.

I also acknowledge with a deep sense of reverence, my gratitude towards my parents, my family members and friends, who have always supported me morally as well as economically.

Thanking You

Kanishk Krishnamurthy

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INTRODUCTION

- **What is Aqavanq Payroll Management System?**

  The Aquapayroll management system helps employers pay wages to their employees. It is also how they demonstrate their commitment to their workers, fulfil their obligations to agencies and keep financial records in order

- **What are the problems faced by users in travel websites?**

  1)Statutory Compliance & Legislation Issues.

  2)Evolution of Technology.

  3)Need for Higher Flexibility.

  4)Shortage of Payroll Professionals.

  5)Challenges in Attendance & Leave Management.

  6)Challenges in Handling Remote Work.

  7)Threat to Data Security.

- **What's our solution to these issues?**

  By using MySQL and Python we have built a payroll management which is :

  1)Secure

  2)Reliable

  3)Easy to use

  4)Transparent to the concerned administrators

Objective:

To create a responsive payroll management system that has a user-friendly interface and is equipped with admin-centric features.

Team members:

1)Kanishk

2)Pranav

Kanishk-Programmer Architect and Lead Programmer

Pranav-Lead Programmer and Progammer Analyst

Hardware requirements:

Processors:

1)Intel® Core™ i5 processor 4300M at 2.60 GHz or 2.59 GHz (1 socket, 2 cores, 2 threads per core)
2)8 GB of DRAMIntel® Xeon® processor E5-2698 v3 at 2.30 GHz (2 sockets
3)16 cores each1 thread per core)
4)64 GB of DRAMIntel® Xeon Phi™ processor 7210 at 1.30 GHz (1 socket,

64 cores, 4 threads per core)

5)32 GB of DRAM, 16 GB of MCDRAM (flat mode enabled)

6)Display Minimum | Recommended

1024 x 768 | 1920 x 1200 or higher

Disk space:

Minimum requirements 4GB(preferably 6GB)

Software requirements:

Operating systems: Windows 8,10 ,11

Python 3.10.0

MySQL 8.0.30

Flow of Program

1)Step 1:User registers himself/herself at the login/registration page.

in case ,account is previously created user can just proceed to directly login.

2)Step 2:The user is required to close the tab after login to proceed to the python interface.

2)Step2:The python interface is opened and the user is required to enter the name of the database previously created or wants to create.

4)Step 4:The user has access to the payroll management system where he/she has to the right to perform certain actions that can be seen further in the report.

SOURCE CODE:

REGISTRATION /LOGIN PAGE:

```
from tkinter import *
from tkinter import messagebox
import mysql.connector
import os
import time

#connecting to the database

db =
mysql.connector.connect(host="localhost",user="root",password="tiger",da
tabase="myschool")
mycur = db.cursor()


def error_destroy():
    err.destroy()


def succ_destroy():
    succ.destroy()
    root1.destroy()


def error():
    global err
    err = Toplevel(root1)
    err.title("Error")
    err.geometry("200x100")
    Label(err,text="All fields are required..",fg="red",font="bold").pack()
    Label(err,text="").pack()

Button(err,text="Ok",bg="grey",width=8,height=1,command=error_destroy)
.pack()

def success():
```

```
    global succ
    succ = Toplevel(root1)
    succ.title("Success")
    succ.geometry("200x100")
    Label(succ, text="Registration successful...", fg="green", font="bold").
              pack()
    Label(succ, text="").pack()
    Button(succ, text="Ok", bg="grey", width=8, height=1,
     command=succ_destroy). pack()

def register_user():
    username_info = username.get()
    password_info = password.get()
    if username_info == "":
        error()
    elif password_info == "":
        error()
    else:
        sql = "insert into u_p values(%s,%s)"
        t = (username_info, password_info)
        mycur.execute(sql, t)
        db.commit()
        Label(root1, text="").pack()
        time.sleep(0.50)
        success()



def registration():
    global root1
    root1 = Toplevel(root)
    root1.title("Registration Portal")
    root1.geometry("580x350")
```

```
    global username
    global password
    Label(root1,text="Register your
account",bg="grey",fg="black",font="bold",width=300).pack()
    username = StringVar()
    password = StringVar()
    Label(root1,text="").pack()
    Label(root1,text="Username :",font="bold").pack()
    Entry(root1,textvariable=username).pack()
    Label(root1, text="").pack()
    Label(root1, text="Password :").pack()
    Entry(root1, textvariable=password,show="*").pack()
    Label(root1, text="").pack()

Button(root1,text="Register",bg="magenta",command=register_user).pack()

def login():
    global root2
    root2 = Toplevel(root)
    root2.title("Log-In Portal")
    root2.geometry("300x300")
    global username_varify
    global password_varify
    Label(root2, text="Log-In Portal", bg="grey", fg="black",
font="bold",width=300).pack()
    username_varify = StringVar()
    password_varify = StringVar()
    Label(root2, text="").pack()
    Label(root2, text="Username :", font="bold").pack()
    Entry(root2, textvariable=username_varify).pack()
    Label(root2, text="").pack()
    Label(root2, text="Password :").pack()
    Entry(root2, textvariable=password_varify, show="*").pack()
```

```
    Label(root2, text="").pack()
    Button(root2, text="Log-In", bg="red",command=login_varify).pack()
    Label(root2, text="")

def logg_destroy():
    logg.destroy()
    root2.destroy()

def fail_destroy():
    fail.destroy()

def logged():
    global logg
    logg = Toplevel(root2)
    logg.title("Welcome")
    logg.geometry("200x100")
    Label(logg, text="Welcome {} ".format(username_varify.get()),
fg="green", font="bold").pack()
    Label(logg, text="").pack()
    Button(logg, text="Log-Out", bg="grey", width=8, height=1,
command=logg_destroy).pack()


def failed():
    global fail
    fail = Toplevel(root2)
    fail.title("Invalid")
    fail.geometry("200x100")
    Label(fail, text="Invalid credentials...", fg="red", font="bold").pack()
    Label(fail, text="").pack()
    Button(fail, text="Ok", bg="grey", width=8, height=1,
command=fail_destroy).pack()
```

```
def login_varify():
    user_varify = username_varify.get()
    pas_varify = password_varify.get()
    sql = "select * from u_p where username = %s and password = %s"
    mycur.execute(sql,[(user_varify),(pas_varify)])
    results = mycur.fetchall()
    if results:
        for i in results:
            logged()
            break
    else:
        failed()


def main_screen():
    global root
    root = Tk()
    root.title("Log-IN Portal")
    root.geometry("690x420")

    bgg = PhotoImage(file = r"C:\Users\BRIGADE
SCHOOL\Desktop\images\Aurora.png")
    label = Label(root, image = bgg)
    label.place(x = 0, y = 0, relwidth = 1, relheight = 1)
    Label(root,text="Welcome to Log-In
    Portal",font="bold",bg="grey",fg="black",width=300).pack(pady = 100)


Button(root,text="Log-IN",width="8",height="1",bg="magenta",font="bold",
command=login).pack(pady = 40)
```

```
Button(root,
text="Registration",height="1",width="15",bg="cyan",font="bold",command
=registration).pack()

root.mainloop()

main_screen()
```

MAIN CODE:

```
import chk12
import mysql.connector
import datetime
from tabulate import tabulate

db=input('Enter name of new or existing payroll database:')
mydb=mysql.connector.connect(host='localhost',user='root',password='tige
r')
mycursor=mydb.cursor()

sql='CREATE DATABASE if not exists %s'%(db,)
mycursor.execute(sql)
print('Database created successfully....')
mycursor.execute('use'+' '+db)
TableName=input('Name of Table to be created:')
query='Create table if not exists'+' '+TableName+' '+'\
(empno int primary key,\
name varchar(15) not null,\
job varchar(15),\
BasicSalary int,\
DA float,\
HRA float,\
GrossSalary float,\
Tax float,\
```

```
NetSalary float)'
print('Table '+TableName+' created/found successfully.....')

mycursor.execute(query)


def menu():
    while True:
        print('\n\n\n')
        print('*'*95)
        print('\t\t\t\t\tMAIN MENU')
        print('*'*95)
        print('\t\t\t\t1.Adding employee records')
        print('\t\t\t\t2.Display Record of all the employees')
        print('\t\t\t\t3.Display Record of a particular Employee')
        print('\t\t\t\t4.Delete Records of all the Employees')
        print('\t\t\t\t5.Delete Record of a particular employee')
        print('\t\t\t\t6.Modify a record')
        print('\t\t\t\t7.Display payroll')
        print('\t\t\t\t8.Display Salary Slip for all the Employees')
        print('\t\t\t\t9.Display Salary Slip for a particular employee')
        print('\t\t\t\t10.Exit')
        print('\n\n\n')
        print('Enter the number of your choice to carry out')
        choice=int(input())
        if choice==1:
            try:
                print('Enter employee information....')
                mempno=int(input('Enter employee no:'))
                mname=input('Enter employee name:')
                mjob=input('Enter employee job:')
                mbasic=float(input('Enter basic salary:'))
                if mjob.upper()=="OFFICER":
```

```
                mda=mbasic*0.5
                mhra=mbasic*0.35
                mtax=mbasic*0.2

            elif mjob.upper()=='MANAGER':
                mda=mbasic*0.45
                mhra=mbasic*0.30
                mtax=mbasic*0.15

            else:
                mda=mbasic*0.40
                mhra=mbasic*0.25
                mtax=mbasic*0.1
            mgross=mbasic+mda+mhra
            mnet=mgross-mtax
            rec
=(mempno,mname,mjob,mbasic,mda,mhra,mgross,mtax,mnet)
            query ="insert into "+TableName+" values
(%s,%s,%s,%s,%s,%s,%s,%s,%s)"
            mycursor.execute(query,rec)

            mydb.commit()
            print('Record added successfuly.....')
        except Exception as e:
            print('Something went wrong',e)

    elif choice==2:
        try:
            query='select *from '+TableName
            mycursor.execute(query)
            print(query)
            print(tabulate(mycursor,headers=['EmpNo','Name','Job','Basic
Salary','DA','HRA','Gross Salary','Tax','Net Salary'],tablefmt='fancy_grid'))
```

```
  except:
      print('Something went wrong')

elif choice==3:
    try:
      en=input('Enter employee no. of the record to be displayed....')
      query='select * from '+TableName+' where empno='+en
      mycursor.execute(query)
      myrecord=mycursor.fetchone()
      print("\n\n Record of Employee No.:"+en)
      print(myrecord)
      c=mycursor.rowcount
      if c==-1:
         print('Nothing to display')
    except:
      print('Something went wrong')


elif choice==4:
    try:
      ch=input('Do you want to delete all the records(y/n)')
      if ch.upper()=='Y':
         mycursor.execute('delete from '+TableName)
         mydb.commit()
         print('All the records are deleted....')

    except:
      print('Something went wrong')

elif choice==5:
    try:
      en=input('Enter employee no. of the record to be deleted....')
```

```
        query='delete from '+' '+TableName+' '+' where empno= '+en
        mycursor.execute(query)
        mydb.commit()
        c=mycursor.rowcount
        if c>0:
            print('Deletion done')
        else:
            print('Employee no',en,'not found')

    except:
        print('Something went wrong')

elif choice==6:
    try:
        en=input("Enter employee no. of the record to be modified...")
        query='select * from '+TableName+' '+' where empno= '+en
        mycursor.execute(query)
        myrecord=mycursor.fetchone()
        c=mycursor.rowcount
        if c==-1:
            print("Empno. "+en+" does not exist")
        else:
            mname=myrecord[1]
            mjob=myrecord[2]
            mbasic=myrecord[3]
            print("empno. :",myrecord[0])
            print("name   :",myrecord[1])
            print("job    :",myrecord[2])
            print("basic  :",myrecord[3])
            print("da     :",myrecord[4])
            print("hra    :",myrecord[5])
            print("gross  :",myrecord[6])
            print("tax    :",myrecord[7])
```

```
                print("net    :",myrecord[8])
                print("------Type value to make changes or just press enter to
not make changes----------------")
                x=input("Enter name")
                if len(x)>0:
                    mname=x
                x=input("Enter job")
                if len(x)>0:
                    mjob=x
                x=input("Enter basic salary")
                if len(x)>0:
                    mbasic=float(x)
                query=" update "+' '+TableName+' '+' set name= '+" '
"+mname+" ' "+" , "+' job='+" ' "+mjob+" ' "+' , '+' basicsalary=
'+str(mbasic)+' where empno='+en
                print(query)
                mycursor.execute(query)
                mydb.commit()
                print('Record modified')

            except:
                print('Something went wrong')

        elif choice==7:
            try:
                query='select * from '+TableName
                mycursor.execute(query)
                myrecords=mycursor.fetchall()
                print("\n\n\n")
                print(95*'*')
                print('Employee Payroll'.center(90))
                print(95*"*")
                now = datetime.datetime.now()
```

```
            print("Current Date and Time:",end=" ")
            print(now.strftime("%Y-%m-%d %H:%M:%S"))
            print()
            print(95*'-')
            print('%-5s %-15s %-10s %-8s %-8s %-8s %-9s %-8s %-9s'\
                %('Empno.','Name','Job','Basic','DA','HRA','Gross','Tax','Net'))

            print(95*'-')
            for rec in myrecords:
               print('%4d %-15s %-10s %8.2f %8.2f %8.2f %9.2f %8.2f
%9.2f'%rec)
            print(95*'-')

         except:
            print("Something went wrong")


      elif choice==8:
         try:
            query='select * from '+TableName
            mycursor.execute(query)
            now=datetime.datetime.now()
            print("\n\n\n")
            print("-"*95)
            print("\t\t\t\tSalary Slip")
            print("-"*95)
            print("Current Date And Time:",end=' ')
            print(now.strftime("%Y-%m-%d %H:%M:%S"))
            myrecords=mycursor.fetchall()
            for rec in myrecords:
               print('%4d %-15s %-10s %8.2f %8.2f %8.2f %9.2f %8.2f
%9.2f'%rec)
            print(95*'-')
```

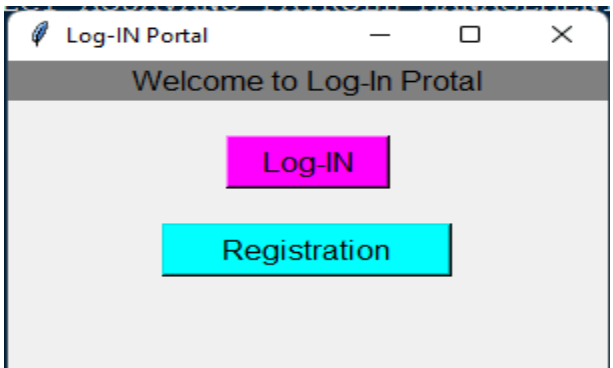
```
            except:
                print("Something went wrong")

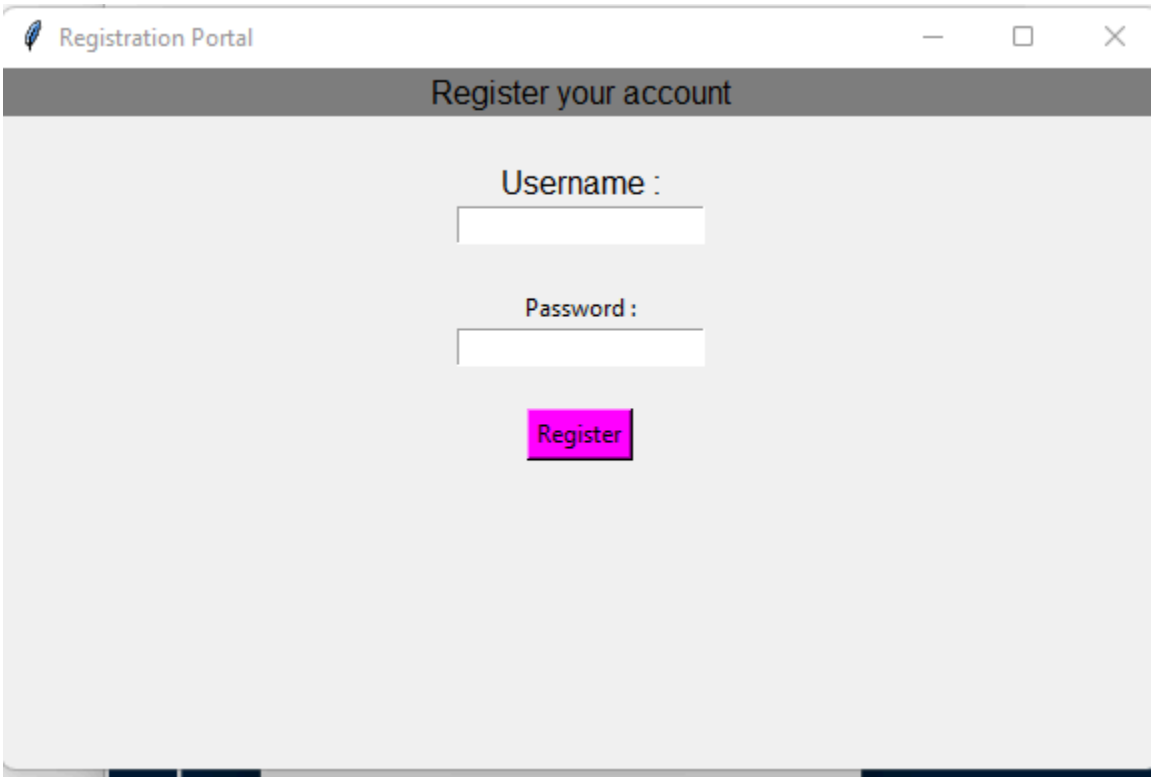
            elif choice==9:
            try:
                en=input("Enter employee number whose pay slip you want to
retrieve:")
                query='select * from '+' '+TableName+' '+' where empno= '+en
                mycursor.execute(query)
                now=datetime.datetime.now()
                print("\t\t\t\tSalary Slip")
                print("Current Date And Time:",end=' ')
                print(now.strftime("%Y-%m-%d %H:%M:%S"))
                print(tabulate(mycursor,headers=['Empno.','Name','Job','Basic
Salary','DA','HRA','Gross Salary','Tax','Net Salary']))

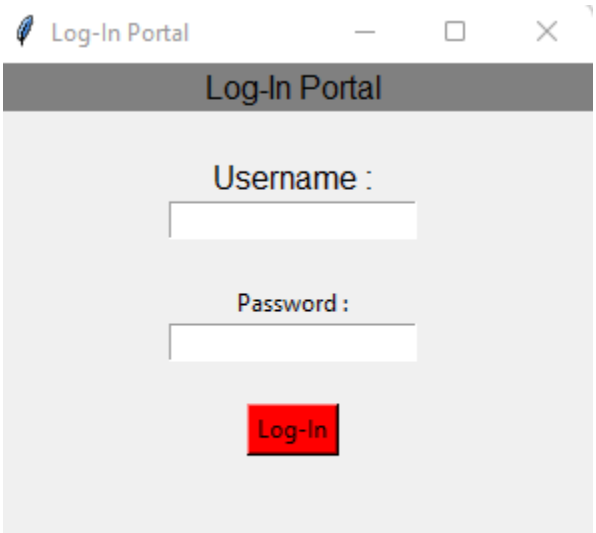
            except Exception as e:
                print("Something went wrong",e)

    elif choice==10:
            print("Thank you for using AQUAVANQ's PAYROLL
MANAGEMENT SYSTEM,Hope to see you soon")
            break
        else:
            print('Wrong choice')
menu()
```

SCREENSHOTS OF OUTPUT




Registration Portal
Register your account
Username :
Password :
Register


Log-In Portal
Log-In Portal
Username :
Password :
Log-In

```
*********************************************************************************************
                                    MAIN MENU
*********************************************************************************************
                               1.Adding employee records
                               2.Display Record of all the employees
                               3.Display Record of a particular Employee
                               4.Delete Records of all the Employees
                               5.Delete Record of a particular employee
                               6.Modify a record
                               7.Display payroll
                               8.Display Salary Slip for all the Employees
                               9.Display Salary Slip for a particular employee
                               10.Exit



Enter the number of your choice to carry out
```

```
*********************************************************************************************
                                    MAIN MENU
*********************************************************************************************
                               1.Adding employee records
                               2.Display Record of all the employees
                               3.Display Record of a particular Employee
                               4.Delete Records of all the Employees
                               5.Delete Record of a particular employee
                               6.Modify a record
                               7.Display payroll
                               8.Display Salary Slip for all the Employees
                               9.Display Salary Slip for a particular employee
                               10.Exit



Enter the number of your choice to carry out
1
Enter employee information....
Enter employee no:1
Enter employee name:KANISHK
Enter employee job:PROFFESSOR
Enter basic salary:900000
Record added successfuly.....
```

```
********************************************************************************************
                                    MAIN MENU
********************************************************************************************
                              1.Adding employee records
                              2.Display Record of all the employees
                              3.Display Record of a particular Employee
                              4.Delete Records of all the Employees
                              5.Delete Record of a particular employee
                              6.Modify a record
                              7.Display payroll
                              8.Display Salary Slip for all the Employees
                              9.Display Salary Slip for a particular employee
                              10.Exit



Enter the number of your choice to carry out
2
select *from new_tab
```

EmpNo	Name	Job	Basic Salary	DA	HRA	Gross Salary	Tax	Net Salary
1	KANISHK	PROFFESSOR	900000	360000	225000	1.485e+06	90000	1.395e+06

```
********************************************************************************************
                                    MAIN MENU
********************************************************************************************
                              1.Adding employee records
                              2.Display Record of all the employees
                              3.Display Record of a particular Employee
                              4.Delete Records of all the Employees
                              5.Delete Record of a particular employee
                              6.Modify a record
                              7.Display payroll
                              8.Display Salary Slip for all the Employees
                              9.Display Salary Slip for a particular employee
                              10.Exit



Enter the number of your choice to carry out
3
Enter employee no. of the record to be displayed....1


 Record of Employee No.:1
(1, 'KANISHK', 'PROFFESSOR', 900000, 360000.0, 225000.0, 1485000.0, 90000.0, 1395000.0)
```

```
*********************************************************************************************
                                        MAIN MENU
*********************************************************************************************
                                1.Adding employee records
                                2.Display Record of all the employees
                                3.Display Record of a particular Employee
                                4.Delete Records of all the Employees
                                5.Delete Record of a particular employee
                                6.Modify a record
                                7.Display payroll
                                8.Display Salary Slip for all the Employees
                                9.Display Salary Slip for a particular employee
                                10.Exit



Enter the number of your choice to carry out
4
Do you want to delete all the records(y/n)y
All the records are deleted....
```

```
*********************************************************************************************
                                        MAIN MENU
*********************************************************************************************
                                1.Adding employee records
                                2.Display Record of all the employees
                                3.Display Record of a particular Employee
                                4.Delete Records of all the Employees
                                5.Delete Record of a particular employee
                                6.Modify a record
                                7.Display payroll
                                8.Display Salary Slip for all the Employees
                                9.Display Salary Slip for a particular employee
                                10.Exit



 Enter the number of your choice to carry out
 5
 Enter employee no. of the record to be deleted....1
 Employee no 1 not found
```

```
Enter the number of your choice to carry out
6
Enter employee no. of the record to be modified...1
empno. : 1
name   : KANISHK
job    : PROFFESSOR
basic  : 900000
da     : 360000.0
hra    : 225000.0
gross  : 1485000.0
tax    : 90000.0
net    : 1395000.0
------Type value to make changes or just press enter to not make changes---------------
Enter nameKANISHK
Enter jobPROFFESSOR
Enter basic salary1000000
 update  new_tab  set name=  ' KANISHK '  ,  job= ' PROFFESSOR '  ,  basicsalary= 1000000.0 where empno=1
Record modified
```

```
*****************************************************************************************************
                                        MAIN MENU
*****************************************************************************************************
                                1.Adding employee records
                                2.Display Record of all the employees
                                3.Display Record of a particular Employee
                                4.Delete Records of all the Employees
                                5.Delete Record of a particular employee
                                6.Modify a record
                                7.Display payroll
                                8.Display Salary Slip for all the Employees
                                9.Display Salary Slip for a particular employee
                                10.Exit



Enter the number of your choice to carry out
7



*****************************************************************************************************
                                      Employee Payroll
*****************************************************************************************************
Current Date and Time: 2022-12-15 13:31:20

-----------------------------------------------------------------------------------------------------
Empno. Name            Job        Basic    DA       HRA      Gross     Tax      Net
-----------------------------------------------------------------------------------------------------
   1  KANISHK         PROFFESSOR  1000000.00 360000.00 225000.00 1485000.00 90000.00 1395000.00
-----------------------------------------------------------------------------------------------------
```

```
*****************************************************************************************************
                                        MAIN MENU
*****************************************************************************************************
                                1.Adding employee records
                                2.Display Record of all the employees
                                3.Display Record of a particular Employee
                                4.Delete Records of all the Employees
                                5.Delete Record of a particular employee
                                6.Modify a record
                                7.Display payroll
                                8.Display Salary Slip for all the Employees
                                9.Display Salary Slip for a particular employee
                                10.Exit



Enter the number of your choice to carry out
8



-----------------------------------------------------------------------------------------------------
                                Salary Slip
-----------------------------------------------------------------------------------------------------
Current Date And Time: 2022-12-15 13:31:44
   1  KANISHK         PROFFESSOR  1000000.00 360000.00 225000.00 1485000.00 90000.00 1395000.00
-----------------------------------------------------------------------------------------------------
```

```
*********************************************************************************************
                                    MAIN MENU
*********************************************************************************************
                              1.Adding employee records
                              2.Display Record of all the employees
                              3.Display Record of a particular Employee
                              4.Delete Records of all the Employees
                              5.Delete Record of a particular employee
                              6.Modify a record
                              7.Display payroll
                              8.Display Salary Slip for all the Employees
                              9.Display Salary Slip for a particular employee
                              10.Exit



Enter the number of your choice to carry out
9
Enter employee number whose pay slip you want to retrieve:1
                              Salary Slip
Current Date And Time: 2022-12-15 13:32:07
  Empno.  Name     Job          Basic Salary      DA     HRA    Gross Salary    Tax    Net Salary
--------  -------  ----------  --------------  ------  ------  --------------  -----  ------------
       1  KANISHK  PROFFESSOR         1000000  360000  225000       1.485e+06  90000     1.395e+06
```

```
*********************************************************************************************
                                    MAIN MENU
*********************************************************************************************
                              1.Adding employee records
                              2.Display Record of all the employees
                              3.Display Record of a particular Employee
                              4.Delete Records of all the Employees
                              5.Delete Record of a particular employee
                              6.Modify a record
                              7.Display payroll
                              8.Display Salary Slip for all the Employees
                              9.Display Salary Slip for a particular employee
                              10.Exit



Enter the number of your choice to carry out
10
Thank you for using AQUAVANQ's PAYROLL MANAGEMENT SYSTEM,Hope to see you soon
```

FUTURE ENHANCEMENTS

This project is very flexible in terms of expansion, there is a huge scope for incorporating many things in the future. Future enhancements include:

- Dealing with more data: In the future, as and when the need arises, we can centralize this application , the introduction of employee's bonus based on appraisal and reports(statistics), and many other features can be incorporated.

- Mobile friendly experience and Accessibility the future a website can be configured as PWA (Progressive web app) so that it will remain identical on all devices.

REFERENCES and BIBILIOGRAPHY

For doing this project we referred to:

- Python for Class 12 and 11 by Sumita Arora
- Class 12 NCERT Computer Science (NEW)
- Python Tkinter Tutorial - GeeksforGeeks.
- ADP-Article and Insights
- Stackoverflow
- Youtube
  https://www.youtube.com/watch?v=QjIqYbiVQuw&t=2222s