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A

MINI PROJECT REPORT

ON

"ACCOUNTS DATABASE-PAYROLL GENERATION SYSTEM"

Submitted in the partial fulfillment of the requirements in the 3rd semester of

BACHELOR OF ENGINEERING
IN
INFORMATION SCIENCE AND ENGINEERING

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CERTIFICATE

It is to certify that the mini project entitled "Accounts Database" is carried out by Akhila S (1NH17IS008), a bonafied student of New Horizon College of Engineering, Bengaluru, in partial fulfillment of the requirements in the III semester of Bachelor of Engineering in Information Science and Engineering of the Visvesvaraya Technological University, Belgaum during the year 2018-2019. The project report has been approved as it satisfies the academic requirement in respect of mini project work.

Project Guide **Head of the Department**

ABSTRACT

A Database management system is a collection of programs that enables you to store, modify and extract information from a database. The accounting department is responsible for maintaining all the cash transactions of a company. The main responsibilities of accounts department are generating payroll for all the employees, calculation of the income tax to be paid by every employee and budgeting. Though considered "back office" activities, the functions of an accounting department are essential to the proper functioning of an organisation. Hence a proper accounts database is needed.

Previously accounting was entirely based on manual methods which have some flaws like accuracy. Experienced and skilful accountants were required to do the entire manual calculations. This problem is overcome by the usage of a database where all the evaluation is done in the computer with a good accuracy.

The implementation of the accounts database is done using C programming using the concepts of structures.

ACKNOWLEDGEMENT

Any achievement, be it scholastic or otherwise does not depend solely on the individual efforts but on the guidance, encouragement and cooperation of intellectuals, elders and friends. A number of personalities, in their own capacities have helped me in carrying out this mini project. I would like to take this opportunity to thank them all.

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Chapter 1

INTRODUCTION

Accounts Database of an organization is used to maintain all the financial transactions of an organization. Some of the responsibilities of the accounts department are accounts payable, payroll, budgeting, financial controls. In this project we generate the pay slip/payroll for all the employees of the organization.

1.1 Motivation of Project

The purpose of creating an accounts database is to evaluate and store the salary of all the employees in an organization which makes the work easier for the accounts department.

The database we are creating is not only used for evaluating or storing the employee salary but the data is also used by the HR department to give bonus to the employees. If we look at the traditional methods, we understand that manual approach is needed, where all the calculations are written down in a piece of paper and the calculations are done. The drawback of doing these kind of calculations manually will result in error and one small mistake may change the final answer.

The computerized accounting of data offers unlimited storage of memory and the information retrieval is also easy. It is one of the best improvements of the traditional book keeping method. The data is stored in the form of tables which has proven easy to comprehend and effective in the long run.

The organization must maintain proper records of all the transactions taking place so that it might be useful for future references.

Hence the accounts department makes use of the database to make all the evaluation, storage easy. It also provides access to other department so that they can do the necessary evaluation.

The project is implemented using the concept of files and structures using C programming.

1.2 Problem statement

To design and implement a database which generates the payroll/salary and the amount of tax to be paid by the employees in an organization.

Chapter 2

SYSTEM REQUIREMENT SPECIFICATION

Purpose: The purpose of the project is to provide accounts database to companies/organizations to store and evaluate their crucial data. In this project we calculate the payroll/salary of every employee based on their basic salary, the concessions and the tax they have to pay.

2.1 Hardware System Configuration:

Processor	- Intel PentiuM
Speed	- 1.8 GHz
RAM	- 256 MB (min)
Hard Disk	- 1 GB

2.2 Software System Configuration:

Operating System	- Windows
Programming Language	- C
Compiler	- Turbo C outcomes

Chapter 3

METHODOLOGY

3.1 Algorithm

Step 1: Start

Step 2: Create a structure with employee details like employee ID, employee name, and employee basic salary

Step 3: Input the number of employees

Step 4: Open a file in write mode using a file pointer emp

Step 5:for i=1 to n

Input emp ID,emp name,basic

Close the file

Step 6: Open the file in read mode using a file pointer emp

Step 7:for i=1 to n

Display emp ID,emp name,basic salary

Step 8: Evaluate

da=0.35*basic

hra=0.45*basic

gs=basic+da+hra

ags=gs*12;

Step 9 : if ags<250000

Display “no tax”

else if ags>=250000 and ags<500000

tax=0.05*ags

ns=ags-tax

else if ags>=500000 and ags<1000000

tax=0.20*ags

ns=ags-tax

else

tax=0.30*ags

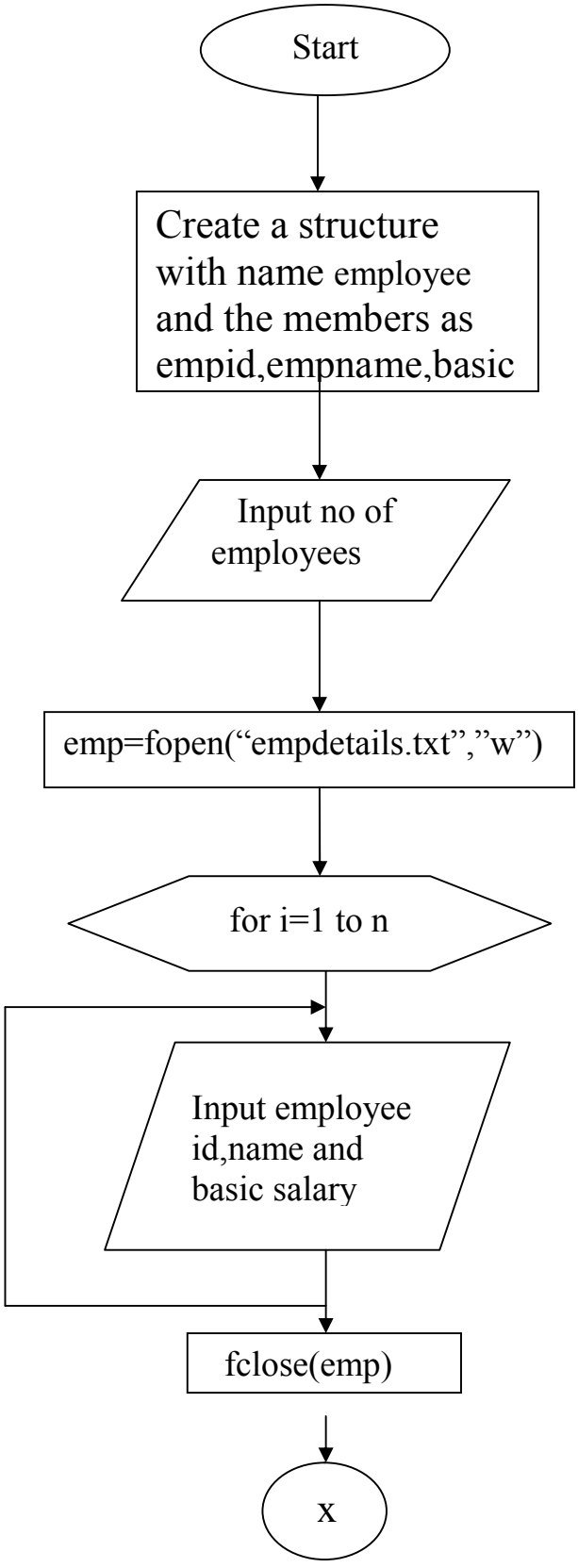
ns=ags-tax

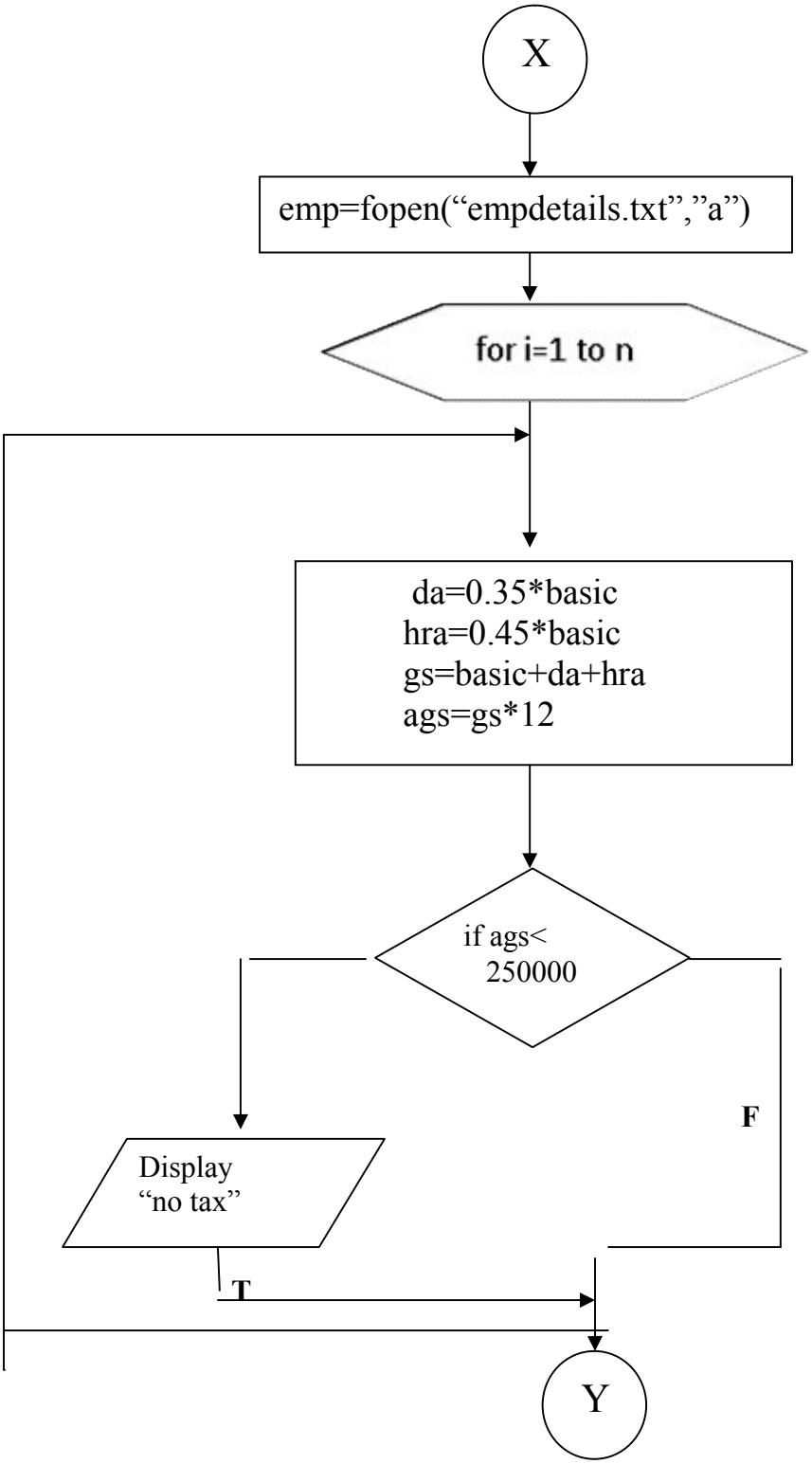
Step 10: Display the net salary and the tax to be paid

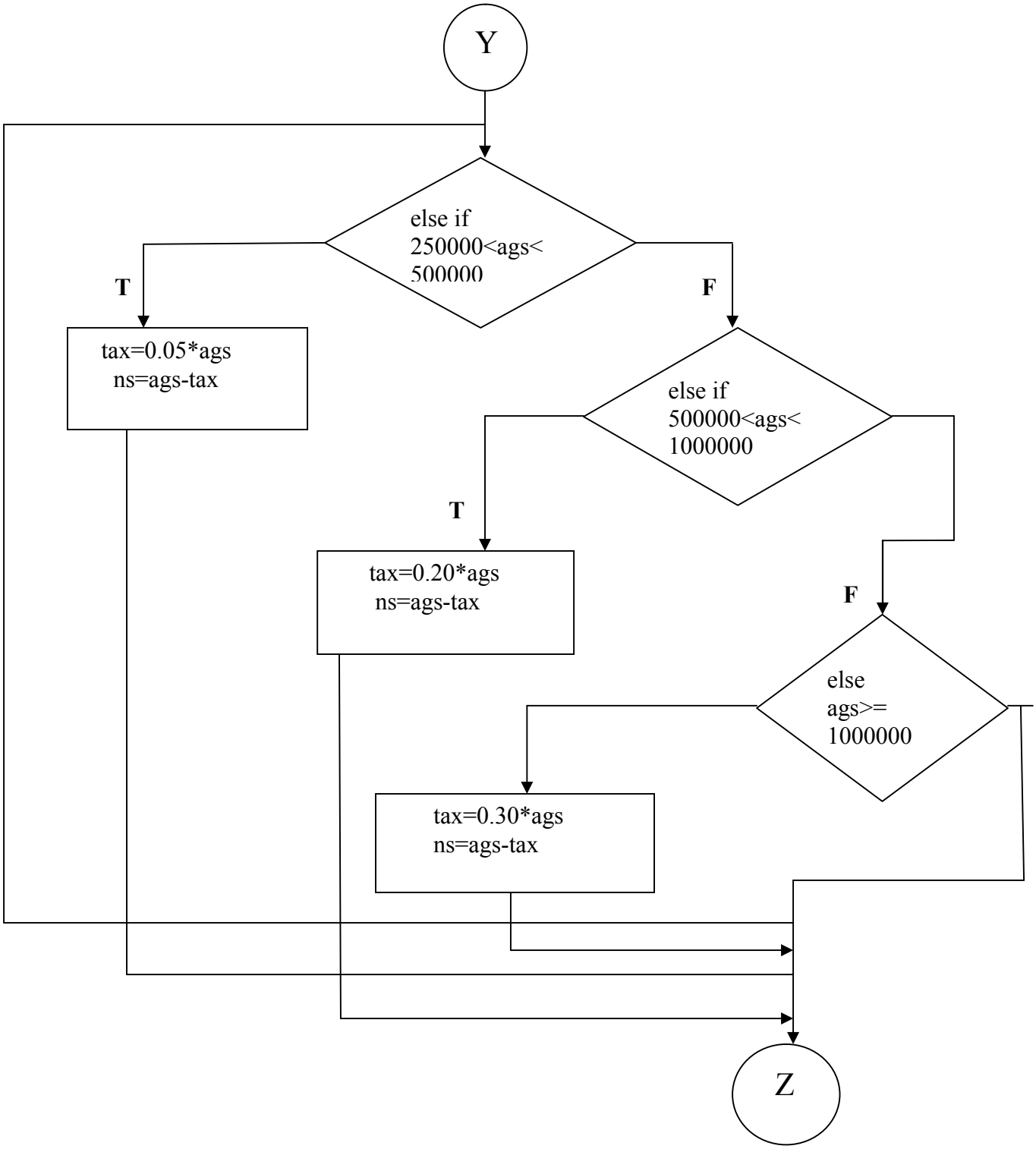
Step 11: Close the file

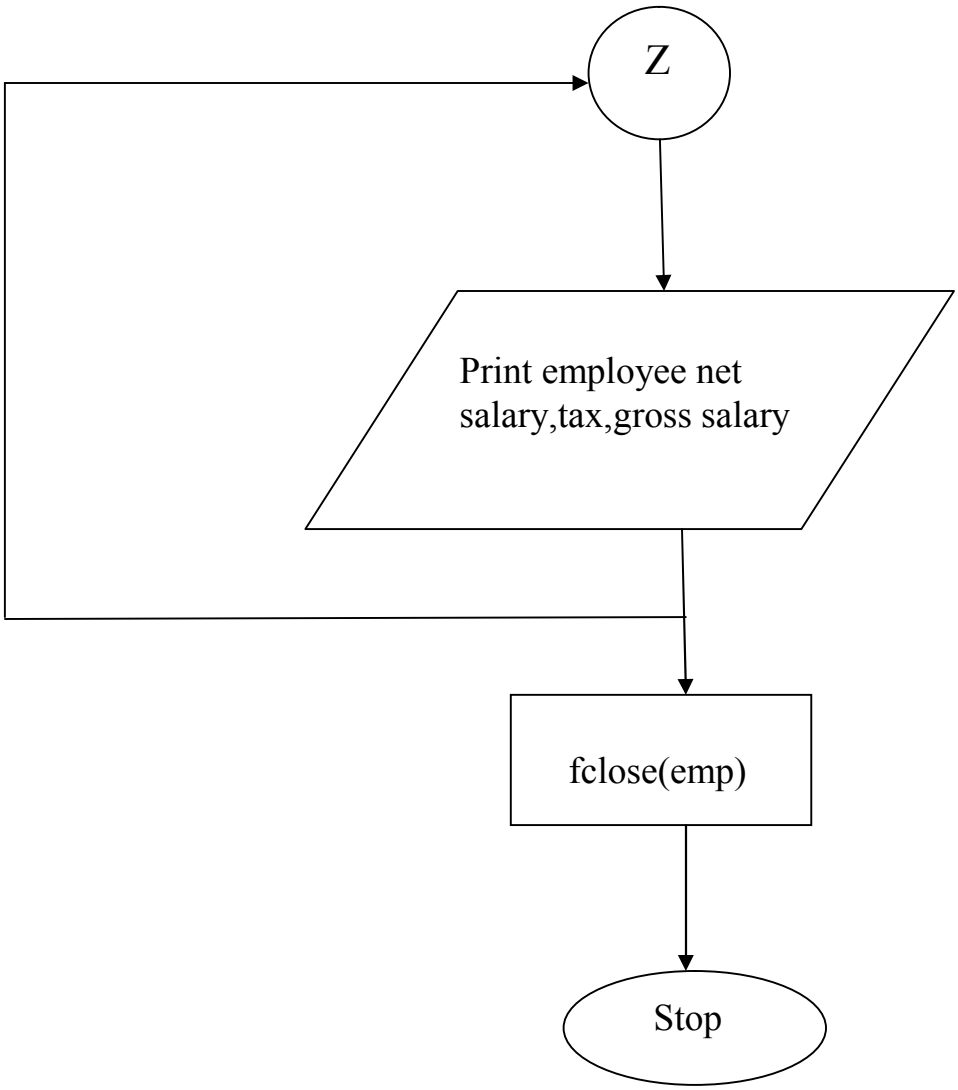
Step 12: Stop

3.2 Flowchart




X
emp=fopen(“empdetails.txt”,”a”)
for i=1 to n
da=0.35*basic
hra=0.45*basic
gs=basic+da+hra
ags=gs*12
if ags<
250000
F
Display
“no tax”
T
Y


Y
else if
250000<ags<
500000
T
F
tax=0.05*ags
ns=ags-tax
else if
500000<ags<
1000000
T
F
tax=0.20*ags
ns=ags-tax
else
ags>=
1000000
tax=0.30*ags
ns=ags-tax
Z


Z
Print employee net
salary,tax,gross salary
fclose(emp)
Stop

3.3 Code and Implementation

```
#include<stdio.h>
struct Employee
{
      char empid[20];
     char empname[50];
     float basic;
};

int main()
{
      struct Employee Sal;
     FILE *emp;
       int n,i,j;
       float DA,HRA,PF,EPF,GS,NS,AGS,tax;
        printf("\n Enter the Number of Employees \n");
        scanf("%d",&n);
        emp= fopen("empdetails.txt","w");
       for(i=1;i<=n;i++)
         {
            printf("\nEnter Employee Number.\n");
            scanf("%s",Sal[i].empid);
```

```
            printf("Enter Employee Name.\n");
            scanf("%s",Sal[i].empname);
            printf("Enter Employee Salary.\n");
            scanf("%f",&Sal[i].basic);
          }
 fclose(emp);
emp= fopen("empdetails.txt","r");
    for(i=1;i<=n;i++)
        {
            DA=0.35*Sal.basic;
            HRA=0.45*Sal.basic;
            GS=Sal.basic+DA+HRA;
            AGS=GS*12;
                if(AGS<=250000)
                 {
                   printf("\n no tax to be paid");
                    NS=AGS;
                  }
              else if(AGS>250000&&AGS<500000)
                 {
                       tax=0.05*AGS;
                      NS=AGS-tax;
                 }
             else if(AGS>=500000&&AGS<1000000)
```

```
            {
                    tax=0.2*AGS;

                     NS=AGS-tax;
                }
            else
             {
                   tax=0.3*AGS;
                  NS=AGS-tax;

                }
        printf( "\n  emp id \t emp name \t  emp basic \t  gs \t  tax \t  ns \n" );
        printf("%s \t %s \t %f \t %f\t%f\t%f\n",
                Sal.empid,Sal.empname,Sal.basic,GS,tax,NS);

       }
fclose(emp);

   return 0;
}
```

Chapter 4

RESULTS AND DISCUSSION

4.1 Explanation

The output of the program gives us the payroll of each employee and the tax to be paid. The gross salary of each employee is calculated after including all the allowances like DA (Dearness Allowance), HRA (House Rent Allowance) with the basic salary. Then the net salary is calculated after deducting the tax from the annual gross salary. The tax is calculated based on certain conditions.

4.2 Output (Snapshots)

The following output generates the payroll of 6 employees.

```
 Enter the Number of Employees
6

Enter Employee Number.
AS010
Enter Employee Name.
ARUN
Enter Employee Salary.
23000

Enter Employee Number.
AS020
Enter Employee Name.
BHARGAVI
Enter Employee Salary.
24500

Enter Employee Number.
AS030
Enter Employee Name.
ARUNA
Enter Employee Salary.
28000
```

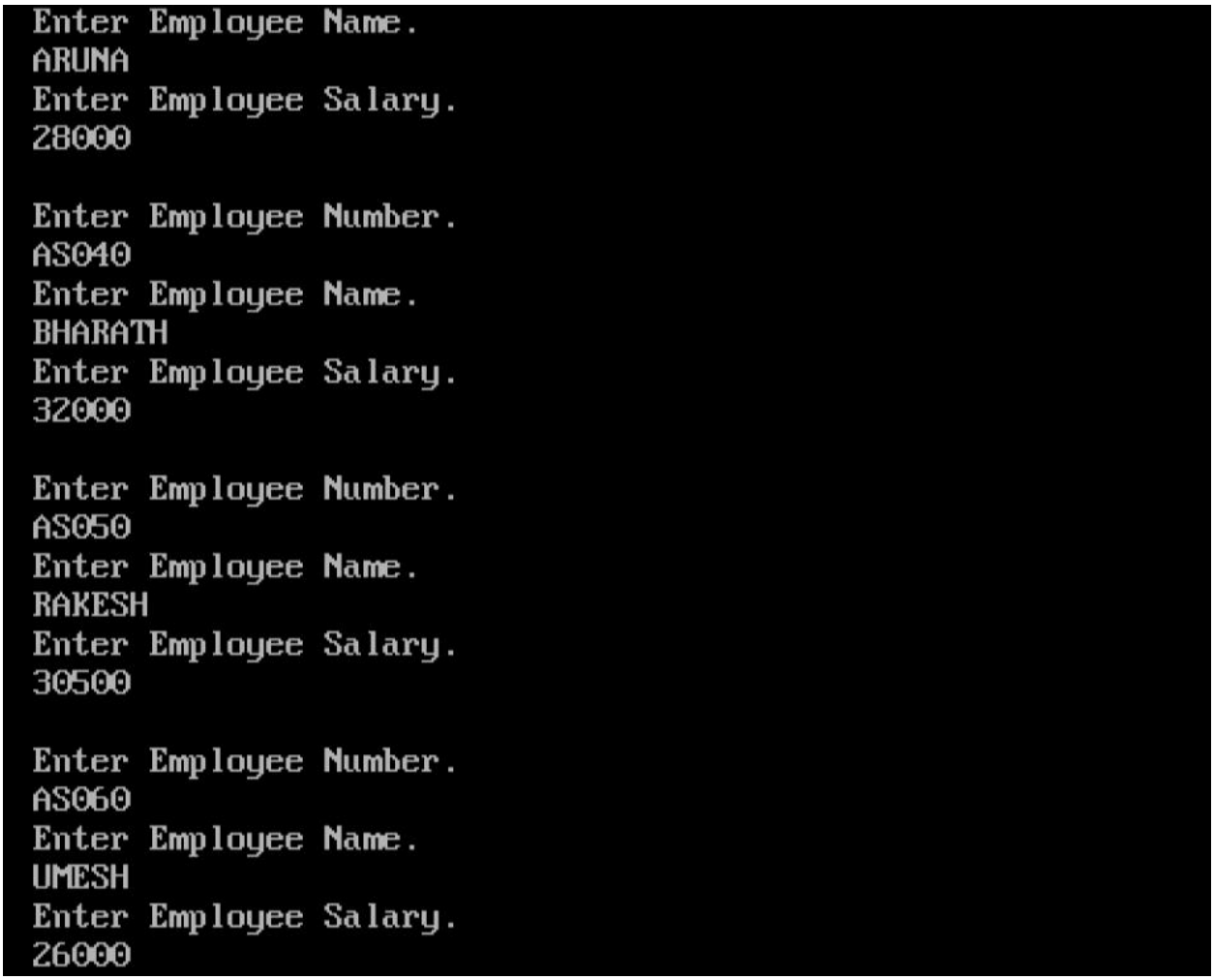
```
23000

Enter Employee Number.
AS020
Enter Employee Name.
BHARGAVI
Enter Employee Salary.
24500

Enter Employee Number.
AS030
Enter Employee Name.
ARUNA
Enter Employee Salary.
28000

Enter Employee Number.
AS040
Enter Employee Name.
BHARATH
Enter Employee Salary.
32000

Enter Employee Number.
```


Enter Employee Name.
ARUNA
Enter Employee Salary.
28000
Enter Employee Number.
AS040
Enter Employee Name.
BHARATH
Enter Employee Salary.
32000
Enter Employee Number.
AS050
Enter Employee Name.
RAKESH
Enter Employee Salary.
30500
Enter Employee Number.
AS060
Enter Employee Name.
UMESH
Enter Employee Salary.
26000

```
emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS010   ARUN            23000   41400.00       24840.00        471960.00

emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS020   BHARGAVI                24500   44100.00        105840.00       423360.0
0
emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS030   ARUNA           28000   50400.00       120960.00       483840.00

emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS040   BHARATH         32000   57600.00       138240.00       552960.00

emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS050   RAKESH          30500   54900.00       131760.00       527040.00

emp id  emp name        emp basic gs           tax             ns
-------------------------------------------------------------------------
AS060   UMESH           26000   46800.00       112320.00       449280.00
_
```

CONCLUSION AND FUTURE ENHANCEMENTS

The accounts database which generates the payroll for all the employees is written using C Programming using the concepts of array of structures.

NoSQL is all the rage, and many people are considering a move to NoSQL database systems. Database users sense that relational database systems are yesterday's technology and NoSQL is the future. NoSQL is not a single technology. Specifically, it is an anti-technology: Any database technology that does not use the SQL query language can be called NoSQL. Depending on the NoSQL database you choose, you might get better performance, better write scaling, or a database language that more closely matches your application language.

REFERENCES

The following books were very helpful during the completion of project:

1. The C Programming Language (Ansi C Version)

   -Brain W Kernighan and Dennis M. Ritchie

2. C in Depth

   -Deepali Srivatsava and S. K Srivatsava

3. Introduction to Programming in C

   - Padma Reddy