



SRM Payroll Management System

Project submitted to the

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In

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METHODOLOGY

This project is “SRM Pay Roll Management System” which can be used to perform various operations and store the Salary records of people without SQL (database) i.e. only using file handling in C++. With the help of this project, one can perform various operations which include

- Creating an employee record
- Displaying all employee records
- Search for a particular employee record with his/her ID
- Modifying a particular employee record
- Deleting a particular employee record
- Printing the Pay Slip of the employee.

Class employee: The class employee is created with public string variables to store name, id, password, salary given or not (strings), age, years of experience (integers) and salary (float).

Intro page (intro() function): Displays “SRM PAYROLL MANAGEMENT PROJECT”, when we click enter directs to the login page.

Employee Login (emplogin() function): Inputs id, password of the employee, searches for the details entered in the text file and takes the user to the employee display page where the employee can print his play slip (empdisplay() function with the id of the employee passed as parameter) if the details match, else it prints “details doesn’t match” and asks for the details again.

Manager Login (managerlogin() function): Inputs manager username (“manager”) and password (“password”), if the login details match with the details, then it takes to the manager display page where the manager can perform the functions of adding employee, display all, search, modify, delete employee record and print employee pay slip(manager_display() function).

Login (login() function): After the intro page, the user has to select the mode (manager or employee) after which the user will be directed to the respective login page.

Adding Employee (add_employee() function): This function takes the details of the employee (id, name, age, years of experience, salary, salary received[yes/no]) as input from the manager, creates a unique password for the employee login and writes the details in the text file line by line.

Delete Employee (delete_employee() function): This function takes the id of the employee whose record has to be deleted, finds the id in the file, writes the

reading data except the data related to the id into another text file, removes the initial file and renames the new file with the initial filename.

Display All records (display_all() function): This function reads the entire data from the file line by line and prints the entire data, else if the file is empty No records message will be printed, after deleting when enter is clicked, it takes back to the manager display page.

Search for specific employee record (display_sp() function): This function takes the id of the employee to find the record, reads the file to find the data related to the id, and outputs the data in the employee record line by line (id, name, age, years of experience, salary, salary received (yes/no)); if not found, prints not found message.

Modify employee record (modify_employee() function): The function takes id of the employee to modify the record, transfers the details of remaining employees line by line to another file, takes the modified details of the employee from the manager and adds them to the new file, removes the initial file and renames the new file with the initial filename.

Print pay slip (print_payroll() function): This function takes the id of the employee as input, searches for the employee details with the id in the text file, reads and outputs the details of the employee in the form of a pay slip by calculating the allowances and deductions and prints the pay slip with the net salary.

Employee specific details (empdisplay_sp() function): It takes the employee id, finds it in the file and outputs the details according to the category line by line.

Manager display page (manager_display() function): The function displays the functions, the manager can perform, and inputs the choice of function to perform from the manager and calls the required functions according to the choice i.e., 'add_employee()' for adding employee record, 'display_all()' for displaying all employees' records, 'display_sp()' for searching, 'modify_employee()' for modifying, 'delete_employee()' for deleting employee record, 'print_payroll()' for printing pay slip of the employee.

Employee display page (empdisplay() function): This function displays the functions, the employee can perform, which is only printing the pay slip (using print_payroll() function).

The main() function : Employee class object is created, intro() function is called and the login mode selection, the user is taken to the manager login page / employee login page according to the choice.

SOURCE CODE

```
#include<iostream>
#include<fstream>
#include<bits/stdc++.h>
#include<conio.h>
#include<process.h>
#include<cstdio>
#include<cstring>

using namespace std;
void empdisplay(string);
void manager_display();

class employee{
    public:
        string name,id,password;
        int age;
        double salary;
        int yearsofexp;
        string salarygivenornot;
};

void intro()
{
    cout<<"\n\n\n\t\t SRM PAYROLL MANAGEMENT PROJECT";
    cout<<"\n\t\t -----";
    //cout<<"\n\n\t\t MANAGEMENT";
    //cout<<"\n\n\t\t PROJECT";
    cin.get();
}

int emplogin()
{
```

```

int i;
char c=' ',pword[10];
    string id,pass;
    //char pass[10]="password";

    cout<<" \n          EMPLOYEE LOGIN";
    cout<<" \n          -----_-----";
    cout<<" \n          ENTER ID:-";

cin>>id;

    cout<<" \n          ENTER PASSWORD:-";

//cin>>pass;
while (i < 10)
{
    pword[i] = getch();
    c = pword[i];
    if (c == 13)
        break;
    else
        printf("*");
    i++;
}

    pword[i] = '\0';

fstream f1;
f1.open("data.txt",ios::in);
string line,idstr;
bool flag = false;
while(getline(f1,line)){
    if(line == id){
        idstr=line;
        flag = true;
        getline(f1,line);
        pass=line;
    }
}

if(flag==false)

```

```

        return 3;
    if(pword==pass)
        {empdisplay(id);
        return 2;}
    return 3;
}
int managerlogin()
{
    int i;
    char c=' ',pword[10];
    string uname;
    char pass[10]="password";
    cout<<" \n          MANAGER LOGIN";
    cout<<" \n          -----";
    cout<<" \n          ENTER USERNAME:-";
    cin>>uname;
    cout<<" \n          ENTER PASSWORD:-";
    //cin>>pass;
    while (i < 10)
    {
        pword[i] = getch();
        c = pword[i];
        if (c == 13)
            break;
        else
            printf("*");
        i++;
    }
    pword[i] = '\0';
    if((uname=="manager") &&strcmp(pword, pass) == 0)
        {manager_display();
        return 1;}
    return 0;
}

```

```

int login()
{
    char inp;

    system("cls");

    cout<<"\n\n\t1.Manager Mode"<<endl;
    cout<<"\n\n\t2.Employee Mode"<<endl;
    cout<<"\n\n\tEnter login mode:";

    cin>>inp;

    if(inp!='1' && inp!='2')
    {cout<<"\tChoose appropriate login mode"<<endl;
    cout<<"\tpress any key to continue...";
    getch();
    login();}

return inp;
}

void add_employee(){
    employee e;
    string h;

    cout<<"enter the employee details: "<<endl;
    cout<<"id: ";
    cin>>e.id;
    cout<<"name: ";
    cin>>e.name;
    h=e.name;
    cout<<"age: ";
    cin>>e.age;
    cout<<"Years of working together: ";
    cin>>e.yearsofexp;
    cout<<"salary: ";
    cin>>e.salary;
    cout<<"this month salary recieved or not: ";
    cin>>e.salarygivenornot;
    e.password=e.id+to_string(0)+to_string(h.length()+10);
}

```

```

fflush(stdout);

fstream f;

f.open("data.txt",ios::out | ios::app);

f<<e.id<<endl;

f<<e.password<<endl;

f<<e.name<<endl;

f<<e.age<<endl;

f<<e.yearsofexp<<endl;

f<<e.salary<<endl;

f<<e.salarygivenornot<<endl;

f.close();

system("cls");

}

void delete_employee(string id){
    fstream f1;
    f1.open("data.txt",ios::in);
    fstream f2;
    f2.open("tem2.txt",ios::out);
    string line;
    bool flag = false;
    while(getline(f1,line)){
        if(line == id){
            for(int i=0;i<7;i++){
                getline(f1,line);
            }
            flag = true;
        }
        if(line!="")
            f2<<line<<endl;
    }
    if(flag==false){
        cout<<"There is no employee with the given id to delete."<<endl;
    }
}

```



```
else{
    cout<<"The employee record is deleted from the database."<<endl;
}
f1.close();
f2.close();
remove("data.txt");
rename("tem2.txt","data.txt");
cin.ignore();
cin.get();
system("cls");
}
```

```
void display_all(){
```

```
    fstream f;
    string line;
    f.open("data.txt",ios::in);
    getline(f,line);
    if(line==""){
        cout<<"There are no records to display."<<endl;
        f.close();
        cin.ignore();
        cin.get();
        system("cls");
        return ;
    }
```

```
    fstream f1;
    f1.open("data.txt",ios::in);
```

```
    cout<<"The total employee list:"<<endl;
```

```
    while(getline(f1,line)){
        cout<<"Id: "<<line;
        getline(f1,line);
```

```

        getline(f1,line);
        cout<<"\tName: "<<line;

        for(int i = 0;i<2;i++){
            getline(f1,line);}
        getline(f1,line);
        cout<<"\tsalary:"<<line<<endl;
        getline(f1,line);
    }
    f1.close();
    cin.ignore();
    cin.get();
    system("cls");
}

void display_sp(string id){
    fstream f1;
    f1.open("data.txt",ios::in);
    string line;
    bool flag = false;
    while(getline(f1,line)){
        if(line == id){
            flag = true;
            cout<<"The employees details are: "<<endl;
            cout<<"\tId: "<<line<<endl;
            getline(f1,line);
            getline(f1,line);
            cout<<"\tName: "<<line<<endl;
            getline(f1,line);
            cout<<"\tAge: "<<line<<endl;
            getline(f1,line);
            cout<<"\tYear of working together: "<<line<<endl;
            getline(f1,line);
            cout<<"\tSalary: "<<line<<endl;

```

```

        getline(f1,line);
        cout<<"\tThis month's Salary recived or not: "<<line<<endl;
        break;
    }
}
if(flag==false){
    cout<<"There is no employee with the given id ."<<endl;
}
f1.close();
cin.ignore();
cin.get();
system("cls");
}

```

```

void modify_employee(string id){
    employee e;
    fstream f1;
    f1.open("data.txt",ios::in);
    fstream f2;
    f2.open("tem2.txt",ios::out);
    string line;
    bool flag = false;
    while(getline(f1,line)){
        if(line == id){
            for(int i=0;i<6;i++){
                getline(f1,line);
            }
            flag = true;
            cout<<"enter the employee details: "<<endl;
            cout<<"id: ";
            e.id=id;
            cout<<e.id<<endl;
            cout<<"name: ";
            cin>>e.name;

```

```

        string h=e.name;
        cout<<"age: ";
        cin>>e.age;
        cout<<"Years of working together: ";
        cin>>e.yearsofexp;
        cout<<"salary: ";
        cin>>e.salary;
        cout<<"this month salary recieved or not: ";
        cin>>e.salarygivenornot;
        e.password=e.id+to_string(0)+to_string(h.length()+10);
        f2<<e.id<<endl;
        f2<<e.password<<endl;
        f2<<e.name<<endl;
        f2<<e.age<<endl;
        f2<<e.yearsofexp<<endl;
        f2<<e.salary<<endl;
        f2<<e.salarygivenornot<<endl;
    }
    if(line!="")
        f2<<line<<endl;
    }
    if(flag==false){
        cout<<"There is no employee with the given id to modify."<<endl;
    }
    else{
        cout<<"The employee record is modified from the database."<<endl;
    }
    cin.ignore();
    cin.get();
    f1.close();
    f2.close();
    remove("data.txt");
    rename("tem2.txt","data.txt");
}

```

```

void print_payroll(string id){
    system("cls");
    fstream f1;
    f1.open("data.txt",ios::in);
    string line;
    bool flag = false;
    while(getline(f1,line)){
        if(line == id){
            flag = true;
            cout<<"Employee Id: "<<line<<endl;
            getline(f1,line);
            getline(f1,line);
            cout<<"\nName: "<<line<<endl;
            getline(f1,line);
            cout<<"\nAge: "<<line<<endl;
            getline(f1,line);
            cout<<"\nYear of working together: "<<line<<endl;
            getline(f1,line);
            cout<<"\nBasic Salary: "<<line<<endl;

            int x=0;
            for(int i=0;i<line.size();i++){
                x = x*10 + (int(line[i])-48);
            }
            cout<<"\n\t\tAllowances(18%): "<<x*0.18<<endl;
            cout<<"\n\t\tDeductions(6%): "<<x*0.06<<endl;
            cout<<"\nNet Total Salary is: "<<x+x*0.12<<endl;
            getline(f1,line);
            cout<<"\n\t\tThis Pay Slip is authorised by SRMAP University. "<<endl;
            break;
        }
    }
    if(flag==false){

```

```

        cout<<"There is no employee with the given id."<<endl;
    }
    f1.close();
    cin.ignore();
    cin.get();
    system("cls");
}

void empdisplay_sp(string id){
    fstream f1;
    f1.open("data.txt",ios::in);
    string line;
    bool flag = false;
    while(getline(f1,line)){
        if(line == id){
            flag = true;
            //cout<<"The employees details are: "<<endl;
            cout<<"\tId: "<<line<<endl;
            getline(f1,line);
            getline(f1,line);
            cout<<"\tName: "<<line<<endl;
            getline(f1,line);
            cout<<"\tAge: "<<line<<endl;
            getline(f1,line);
            cout<<"\tYear of working together: "<<line<<endl;
            getline(f1,line);
            cout<<"\tSalary: "<<line<<endl;
            getline(f1,line);
            cout<<"\tThis month's Salary recived or not: "<<line<<endl;
            break;
        }
    }
    if(flag==false){
        cout<<"There is no employee with the given id to delete."<<endl;
    }
}

```

```

    }
    f1.close();
    return;
}

void manager_display()
{
    char inp;
    x:
    do
        {
            system("cls");
            cout<<"\n\n\tMAIN MENU";

            cout<<"\n\n\t1.CREATE EMPLOYEE RECORD";
            cout<<"\n\n\t2.DISPLAY ALL EMPLOYEE RECORDS";
            cout<<"\n\n\t3.SEARCH EMPLOYEE RECORD ";
            cout<<"\n\n\t4.MODIFY EMPLOYEE RECORD";
            cout<<"\n\n\t5.DELETE EMPLOYEE RECORD";
            cout<<"\n\n\t6.PRINT PAY SLIP OF THE EMPLOYEE";
            cout<<"\n\n\t7.EXIT";
            cout<<"\n\n\tPlease Enter Your Choice (1-7) ";
            cin>>inp;
            system("cls");
            string idinp;
            switch(inp)
            {
                case '1': add_employee(); break;
                case '2': display_all(); break;
                case '3': cout<<"\n\n\tPlease Enter The id number "; cin>>idinp;
                        display_sp(idinp); break;
                case '4': cout<<"\n\n\tPlease Enter The id number "; cin>>idinp;
                        modify_employee(idinp);break;
                case '5': cout<<"\n\n\tPlease Enter The id number "; cin>>idinp;
                        delete_employee(idinp);break;
                case '6': cout<<"\n\n\tPlease Enter The id number "; cin>>idinp;

```

```

        print_payroll(idinp);break;
    case '7': break;
    default: cout<<"\n\n\tPlease enter a vaild option to proceed."<<endl; goto x;
}
}while(inp!='7');
}

```

```

void empdisplay(string id)
{
    char inp;
    x:
    do
    {
        system("cls");
        //cout<<"\n\n\n\tMAIN MENU";
        empdisplay_sp(id);
        cout<<"\n\n\t1.PRINT PAY SLIP OF THE EMPLOYEE";
        cout<<"\n\n\t2.EXIT";
        cout<<"\n\n\tPlease Enter Your Choice (1-2) ";
        cin>>inp;
        if(inp=='1')
            print_payroll(id);
    }
    while(inp!='2');
}

```

```

int main()
{
    employee e;
    intro();
    char ch;
    int con;
    ch=login();
}

```



```
        system("cls");
int a=0;
switch(ch)
    {
        case '1': a= managerlogin();break;
        case '2': a=emplogin(); break;
    }

//con=a;
//if(a==0){
while(a==0)
    {
        system("cls");
        cout<<"\n\t\tDetails does not match.....\n";
        cin.get();
        a=managerlogin();
    }
while(a==3)
    {
        system("cls");
        cout<<"\n\t\tDetails does not match";
        cin.get();
        a=emplogin();
    }
}
```

OUTPUTS

1. Intro :

```
SRM PAYROLL MANAGEMENT PROJECT
-----
```

2. Login Mode :

```
1.Manager Mode
```

```
2.Employee Mode
```

```
Enter login mode:1_
```

3. Manager Login :

```
MANAGER LOGIN
-----
```

```
ENTER USERNAME:-manager
```

```
ENTER PASSWORD:-*****
```

4. Manager Display :

```
MAIN MENU
```

```
1.CREATE EMPLOYEE RECORD
```

```
2.DISPLAY ALL EMPLOYEE RECORDS
```

```
3.SEARCH EMPLOYEE RECORD
```

```
4.MODIFY EMPLOYEE RECORD
```

```
5.DELETE EMPLOYEE RECORD
```

```
6.PRINT PAY SLIP OF THE EMPLOYEE
```

```
7.EXIT
```

```
Please Enter Your Choice (1-7) _
```

5. Create Employee Record :

```
enter the employee details:
id: 1240
name: koushik
age: 26
Years of working together: 4
salary: 60000
this month salary recieved or not: no
```

6. Display All Employee Records :

```
The total employee list:
Id: 1235      Name: chandana  salary:100000
Id: 1236      Name: balaji   salary:50000
Id: 1237      Name: tejaswari salary:100000
Id: 1234      Name: nanda    salary:25000
Id: 1239      Name: krishna   salary:75000
Id: 1240      Name: koushik   salary:60000
```

7. Search Employee Record :

```
Please Enter The id number 1235
The employees details are:
Id: 1235
Name: chandana
Age: 24
Year of working together: 3
Salary: 100000
This month's Salary recieved or not: y
```

8. Modify Employee Record :

```
Please Enter The id number 1237
enter the employee details:
id: 1237
name: balaji
age: 26
Years of working together: 5
salary: 85000
this month salary recieved or not: yes
The employee record is modified from the database.
```

9. Delete Employee Record :

```
Please Enter The id number 1240
The employee record is deleted from the database.
```

10. Print Employee pay slip (Manager mode) :

```
Please Enter The id number
```

```
Employee Id: 1234
Name: nanda
Age: 30
Year of working together: 10
Basic Salary: 25000
                Allowances(18%): 4500
                Deductions(6%): 1500
Net Total Salary is: 28000
                This Pay Slip is authorised by SRMAP University.
```

11. Employee Login :

```
EMPLOYEE LOGIN
-----_-----
ENTER ID:-1234

ENTER PASSWORD: -***** _
```

12. Employee Display :

```
Id: 1234
Name: nanda
Age: 30
Year of working together: 10
Salary: 25000
This month's Salary recived or not: yes

1.PRINT PAY SLIP OF THE EMPLOYEE

2.EXIT

Please Enter Your Choice (1-2) _
```

13. Print pay slip (Employee mode) :

```
Employee Id: 1234

Name: nanda

Age: 30

Year of working together: 10

Basic Salary: 25000

                Allowances(18%): 4500
                Deductions(6%): 1500

Net Total Salary is: 28000

        This Pay Slip is authorised by SRMAP University.
```

Github links:

AP21110011424-<https://github.com/chandanamani-tumapala/Chandana-Mani-Tumapala>

AP21110011464-https://github.com/KrishnaKoushik-G/payroll_management_cpp

AP21110011487-

https://github.com/Nandakiran007/payroll_management_cpp

AP21110011477-https://github.com/Balajikalluru/payroll_management

AP21110011436-https://github.com/Teja298/cpp_payroll_management