



SRI RAMACHANDRA

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Category - I Deemed to be University) Porur, Chennai

SRI RAMACHANDRA ENGINEERING AND TECHNOLOGY

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UNIQUE ID

B. Tech. DEGREE
CONTINUOUS ASSESSMENT 4
OCT – 2020: I YEAR – QUARTER 1

CSE 110: Problem Solving – C Programming
(Common to B.Tech CSE - AI & ML, CyS & IoT, AI & DA, B.Tech - CS & MED Engg.,)

Time: 1 hour – 15 minutes

Maximum Mark: 15

Date: 15/10/2020

Problem Statement:

Implement the logic using C language and develop the code for the given problem statement.

Employee Pay slip has to be printed considering the following leave condition.

1. In a month of 30 days an employee can avail leave only once in a month.
Without deduction in salary.
2. A new employee cannot avail leave for the first month.
3. A new employee cannot avail festival leave.

Description of task:

This is a program to print the Pay slip of an employee considering the following leave conditions.

Firstly the input to be given by the user are:

1. Employee ID
2. Employee Name
3. Basic Salary
4. House Rent Allowance
5. Dearness Allowance
6. Number Of Days Leave Taken [Depending upon conditions]

Secondly the execution part of the program are:

1. The program should create employees
2. Display the records of employees
3. Print the Salary Slip [Calculate the Gross salary]
4. Update the record of old employees [Leave updating and salary updating]

Program:

/*Employee Pay slip has to be printed considering the following leave condition.

- 1) In a month of 30 days an employee can avail leave only once in a month. without deduction in salary.
- 2) A new employee cannot avail leave for the first month.
- 3) A new employee cannot avail festival leave.*/

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
```

```
/* structure to store employee salary details */
```

```
struct employee {
    int empId,x;
    char name[32];
    int basic, hra, da, leave;
    float gross, net;
};
```

```
/* prints payslip for the requested employee */
```

```
void printSalary(struct employee e1) {
    printf("Salary Slip of %s:\n", e1.name);
    printf("Employee ID: %d\n", e1.empId);
    printf("Basic Salary: %d\n", e1.basic);
    printf("House Rent Allowance: %d\n", e1.hra);
    printf("Dearness Allowance: %d\n", e1.da);
```

```

    printf("Gross Salary: %.2f Rupees\n", e1.gross);
    printf("\nNet Salary: %.2f Rupees\n\n", e1.net);
    return;
}

/* display all the employee records entered */
void display(struct employee e1) {
    printf("%d \t %s \t %d \t %d \t %d\n", e1.empId, e1.name, e1.basic, e1.hra, e1.da, e1.leave);
    return;
}

int main() {
    int i, ch, num, flag, empID;
    int choice, update, updateChoice;
    struct employee *e1;

    /* get the number of employees from the user */
    printf("Enter the number of employees:");
    scanf("%d", &num);

    /* dynamically allocate memory to store employee salary details */
    e1 = (struct employee *)malloc(sizeof(struct employee) * num);

    /* get the employee salary details from the customer */
    printf("Enter your input for every employee:\n");
    for (i = 0; i < num; i++) {
        printf("Employee ID:");
        scanf("%d", &(e1[i].empId));
        getchar();
        printf("Employee Name:");
        fgets(e1[i].name, 32, stdin);
        e1[i].name[strlen(e1[i].name) - 1] = '\0';
        printf("Basic Salary:");
        scanf("%d", &(e1[i].basic));
        printf("House Rent Allowance:");
        scanf("%d", &(e1[i].hra));
        printf("Dearness Allowance:");
        scanf("%d", &(e1[i].da));
        printf("\n");
    }
}

```

```
}
```

```
/* printing payslip for the given employee ID */
```

```
while (1) {
```

```
    printf("\n  EMPLOYEE PAYROLL SYSTEM \n");
```

```
    printf("\n\n*****CHOOSE YOUR OPTION*****\n");
```

```
    printf("1) SHOW ALL RECORDS\n");
```

```
    printf("2) ADD NEW EMPLOYEE RECORD\n");
```

```
    printf("3) PRINT THE SALARY SLIP\n");
```

```
    printf("4) UPDATE EMPLOYEE RECORD\n");
```

```
    printf("5) EXIT\n");
```

```
    printf("Enter your choice : ");
```

```
    scanf("%d", &choice);
```

```
    if (choice != 5) {
```

```
        switch(choice){
```

```
            case 1 : /*printing all the records entered before printing the slip */
```

```
                printf("\nEmp. ID. Emp.Name \t Basic \t HRA \t DA \n") ;
```

```
                for (i = 0; i < num; i++) {
```

```
                    display(e1[i]);
```

```
                }
```

```
                break;
```

```
            case 2 : /*adding a new member in the employee list created */
```

```
                num++;
```

```
                i = num-1;
```

```
                printf("Employee ID:");
```

```
                scanf("%d", &(e1[i].empId));
```

```
                getchar();
```

```
                printf("Employee Name:");
```

```
                fgets(e1[i].name, 32, stdin);
```

```
                e1[i].name[strlen(e1[i].name) - 1] = '\0';
```

```
                printf("Basic Salary:");
```

```
                scanf("%d", &(e1[i].basic));
```

```
                printf("House Rent Allowance:");
```

```
                scanf("%d", &(e1[i].hra));
```

```

printf("Dearness Allowance:");
scanf("%d", &(e1[i].da));
printf("\n");
break;

case 3 :    /* gross and net salary calculation */
int x,g;
printf("\n Has the Employee taken leave?");
printf("\nIf Yes Update the leave record [Press 0 to return to menu to
update]\n\nIf No leave taken or already updated select [Press 1 to continue]");
scanf("%d", &g);
if(g==1)
{
for (i = 0; i < num; i++)

{
e1[i].gross = e1[i].basic +
(e1[i].hra * e1[i].basic) / 100 + (e1[i].da * e1[i].basic) / 100;
e1[i].net =
e1[i].gross - e1[i].leave;
}

printf("\nEnter employee ID to get payslip:");
scanf("%d", &empID);
flag = 0;
for (i = 0; i < num; i++) {
if (empID == e1[i].empId) {
printSalary(e1[i]);
flag = 1;
}
}

if (!flag)

{
printf("No Record Found!!\n");
}

break;
}

else

```

```

        {

        break;
    }

case 4 :    printf("Enter the employee ID to update data: ");
            scanf("%d", &update);

            flag = 0;
            for (i = 0; i < num; i++) {
                if (update == e1[i].empId) {

                    printf("\n\n WHAT YOU WANT TO UPDATE? \n");
                    printf("1) NAME\n");
                    printf("2) BASIC SALARY\n");
                    printf("3) HOUSE RENT ALLOWANCE\n");
                    printf("4) DEARNESS ALLOWANCE\n");
                    printf("5) LEAVE UPDATE\n");
                    printf("6) UPDATE ALL RECORDS \n");
                    printf("Enter your choice : ");
                    scanf("%d", &updateChoice);

                    switch(updateChoice){
                        case 1 :    getchar();
                                    printf("Employee Name:");
                                    fgets(e1[i].name, 32, stdin);
                                    e1[i].name[strlen(e1[i].name) - 1] = '\0';
                                    break;

                        case 2 :    printf("Basic Salary:");
                                    scanf("%d", &(e1[i].basic));
                                    break;

                        case 3 :    printf("House Rent Allowance:");
                                    scanf("%d", &(e1[i].hra));
                                    break;

```

```

case 4 :    printf("Dearness Allowance:");
            scanf("%d", &(e1[i].da));
            break;

case 5 :    int b,p,days;
            printf("Are you a new employee(Worked here bellow a
month)? 1[Yes]/0[No]");

            scanf("%d", &b);
            if(b==0)
            {

printf("How Many Days To Be Taken: ");
            scanf("%d", &days);
            if(days>1)
            {
                printf("Your Leave Permission Was Denied Due To
Exceeding Limit Of days");

                break;

            }

            printf("\nNumber Of Days In Month On Which Leave To
Be Taken:");

            scanf("%d", &p);

            if(p==30)
            {
                e1[i].leave = e1[i].basic * (30 - days)/100;

            }

            else if(p==31)

            {

                e1[i].leave = e1[i].basic * (31 - days)/100;

            }

            else if(p==28)

```

```

{

    e1[i].leave = e1[i].basic * (28 - days)/100;

    }

    else
        printf("\n Enter Valid Number");

    }

    else
    {
        printf("\n\nHey Rookie! Since you are new here.....No
leaves Bruh!! Not just Leaves No festival Holidays too!!");

    }

    break;

case 6 :    getchar();
            printf("Employee Name:");
            fgets(e1[i].name, 32, stdin);
            e1[i].name[strlen(e1[i].name) - 1] = '\0';
            printf("Basic Salary:");
            scanf("%d", &(e1[i].basic));
            printf("House Rent Allowance:");
            scanf("%d", &(e1[i].hra));
            printf("Dearness Allowance:");
            scanf("%d", &(e1[i].da));
            printf("\n");
            break;

default:    printf("Error Selection. Try Again !");
}

flag = 1;
}
}

if (!flag) {

```



```
        printf("No Record Found!!\n");
    }
    break;

    case 5 : //printf("5");
        break;

    default: printf("error");
}

printf("\n Do You Want To Continue(1[Yes]/0[No]):");
scanf("%d", &ch);

} else {
    ch = 0;
}

if (!ch) {
    break;
}

}
return 1;
}
```

OUTPUT

```
Enter the number of employees:2
Enter your input for every employee:
Employee ID:1
Employee Name:Hari
Basic Salary:12000
House Rent Allowance:200
Dearness Allowance:100

Employee ID:2
Employee Name:Harjeet
Basic Salary:15000
House Rent Allowance:300
Dearness Allowance:200

EMPLOYEE PAYROLL SYSTEM

*****CHOOSE YOUR OPTION*****
1) SHOW ALL RECORDS
2) ADD NEW EMPLOYEE RECORD
3) PRINT THE SALARY SLIP
4) UPDATE EMPLOYEE RECORD
5) EXIT
Enter your choice : 4
Enter the employee ID to update data: 1

WHAT YOU WANT TO UPDATE?
1) NAME
2) BASIC SALARY
3) HOUSE RENT ALLOWANCE
4) DEARNESS ALLOWANCE
5) LEAVE UPDATE
6) UPDATE ALL RECORDS
Enter your choice : 5
Are you a new employee(Worked here bellow a month)? 1[Yes]/0[No]
```

```
Are you a new employee(Worked here bellow a month)? 1[Yes]/0[No]1
```

```
Hey Rookie! Since you are new here.....No leaves Bruh!! Not just Leaves No festival Holidays too!!  
Do You Want To Continue(1[Yes]/0[No]):1
```

EMPLOYEE PAYROLL SYSTEM

```
*****CHOOSE YOUR OPTION*****
```

- 1) SHOW ALL RECORDS
- 2) ADD NEW EMPLOYEE RECORD
- 3) PRINT THE SALARY SLIP
- 4) UPDATE EMPLOYEE RECORD
- 5) EXIT

```
Enter your choice : 4
```

```
Enter the employee ID to update data: 2
```

```
WHAT YOU WANT TO UPDATE?
```

- 1) NAME
- 2) BASIC SALARY
- 3) HOUSE RENT ALLOWANCE
- 4) DEARNNESS ALLOWANCE
- 5) LEAVE UPDATE
- 6) UPDATE ALL RECORDS

```
Enter your choice : 5
```

```
Are you a new employee(Worked here bellow a month)? 1[Yes]/0[No]0
```

```
How Many Days To Be Taken: 2
```

```
Your Leave Permission Was Denied Due To Exceeding Limit Of days
```

```
Do You Want To Continue(1[Yes]/0[No]):0
```

```
-----  
Process exited after 296.6 seconds with return value 1
```

```
Press any key to continue . . .
```