```
/*
Author:
Address:
Tel
Mobile:

Created Date:
Modified Date:
*/

/*
Cac thanh phan duoc he thong trang bi
1. Them nhan vien
2. Cap nhat thong tin nhan vien
3. Xoa nhan vien
4. Xem thong tin nhan vien
5. So dia chi cua cong ty
6. So luong cua cong ty
7. Luong chi tiet cua ca nhan
8. Tim nhan vien theo ma
9. Tim nhan vien theo ten
10. Hien thi thuc don
0. Thoat
*/

#include <stdio.h>
#include <conio.h>
#include <string.h>
/*****************************************************************************/
/* Enviroment Declaration                                                    */
/*****************************************************************************/
#define MAX                         100

/* Position supported in this company */
#define DIRECTOR                            1
#define CHIEF                               2
#define DEPUTYCHIEF                         3
#define WORKER                              4

/* Benefit supported in this company */
const   float   BENEFIT                 =       1000000.0;
const   float   DIRECTOR_BENEFIT        =       0.25;
const   float   CHIEF_BENEFIT           =       0.2;
const   float   DEPUTYCHIEF_BENEFIT     =       0.15;
const   float   WORKER_BENEFIT          =       0.05;

typedef struct EMPLOYEE {
        char    Code[10];
        char    Name[30];
        char    BirthDay[10]; /* dd/mm/yyyy */
        char    Address[30];
        char    Tel[10];
        float   StaticSalary;
        int             Positon;
} EMPLOYEE;
```

```
/* Khai bao mot mang luu thong tin cac Employee */
EMPLOYEE        Employee[MAX];
int             count = 0;      /* Bien diem kiem soat ban ghi */
/*******************************************************************/
/* End Enviroment Declaration                                      */
/*******************************************************************/

/*******************************************************************/
/* Function Prototype                                              */
/*******************************************************************/
void    DisplayMenu();
void    DisplayEmp(EMPLOYEE e);
void    AddressBook();
void    SalaryBook();
void    SalaryDetail();
void    AddEmp();
void    UpdateEmp(int Index);
void    DeleteEmp(int Index);
float   Salary(int vPosition, float vStaticSalary);
int             FindByCode(char vCode[]);
int             FindByName(char vName[]);
/* Helper Functions */
void    DisplayEmployee();
void    UpdateEmployee();
void    DeleteEmployee();
void    FindCode();
void    FindName();
/*******************************************************************/
/* End Function Prototype                                          */
/*******************************************************************/

/*******************************************************************/
/* Program Entry                                                   */
/*******************************************************************/
void main()
{
        int             key = 1; /* Bien kiem soat vong lap */
        int             i = 0;

        DisplayMenu();

        while(key!=0) {
                flushall();
                printf("\nNhap vao gia tri lua chon: ");
                scanf("%d", &key);
                switch(key) {
                        case 1:
                                AddEmp();
                                break;
                        case 2:
                                UpdateEmployee();
                                break;
                        case 3:
                                DeleteEmployee();
                                break;
                        case 4:
```

```
                DisplayEmployee();
                break;
            case 5:
                AddressBook();
                break;
            case 6:
                SalaryBook();
                break;
            case 7:
                SalaryDetail();
                break;
            case 8:
                FindCode();
                break;
            case 9:
                FindName();
                break;
            case 10:
                DisplayMenu();
                break;
            default:
                printf("Ban hay xem huong dan truoc khi su dung chuong trinh");
        }
    }
    getch();
}
/********************************************************************/
/* End Program Entry                                                */
/********************************************************************/

/********************************************************************/
/* Implementation Function Prototype                                */
/********************************************************************/
/* Hien thi thuc don menu cua chuong trinh */
void DisplayMenu()
{
    printf("\n************** Menu *****************");
    printf("\n*  1.  Them nhan vien              *");
    printf("\n*  2.  Cap nhat thong tin nhan vien *");
    printf("\n*  3.  Xoa nhan vien               *");
    printf("\n*  4.  Xem thong tin nhan vien     *");
    printf("\n*  5.  So dia chi cua cong ty      *");
    printf("\n*  6.  So luong cua cong ty        *");
    printf("\n*  7.  Luong chi tiet cua ca nhan  *");
    printf("\n*  8.  Tim nhan vien theo ma       *");
    printf("\n*  9.  Tim nhan vien theo ten      *");
    printf("\n* 10.  Hien thi thuc don           *");
    printf("\n*-----------------------------------*");
    printf("\n*  0.  Thoat                       *");
    printf("\n*************************************");
}
```

```
/* Hien thi thong tin ve mot nhan vien */
void Display(EMPLOYEE e)
{
        printf("\n--------------------------------");
        printf("\n- Ma nhan vien: %s", e.Code);
        printf("\n-    Ho va ten: %s", e.Name);
        printf("\n-    Ngay sinh: %s", e.BirthDay);
        printf("\n-      Dia chi: %s", e.Address);
        printf("\n-   Dien thoai: %s", e.Tel);
        printf("\n-        Luong: %5.2f", e.StaticSalary);
        switch(e.Positon) {
                case DIRECTOR:
                        printf("\n-      Chuc vu: Giam doc");
                        break;
                case CHIEF:
                        printf("\n-      Chuc vu: Truong phong");
                        break;
                case DEPUTYCHIEF:
                        printf("\n-      Chuc vu: Pho phong");
                        break;
                case WORKER:
                        printf("\n-      Chuc vu: Nhan vien");
                        break;
        }
        printf("\n--------------------------------");
}

/* Hien thi so dia chi */
void    AddressBook()
{
        int i;
        printf("------------------------------------------------------");
        printf("                        So dien thoai                         ");
        printf("------------------------------------------------------");
        printf("\nSTT  Ma                    Ho va ten           Dia chi             Dien thoai");
        for(i=0; i<count; i++)
        {
                printf("\n%d", i +1);
                printf("\t%s", Employee[i].Code);
                printf("\t%s", Employee[i].Name);
                printf("\t%s", Employee[i].Address);
                printf("\t%s", Employee[i].Tel);
        }
        printf("\n------------------------------------------------------");
}

/* Hien thi so luong */
void    SalaryBook()
{
        int i;
        char pos[15];
        printf("------------------------------------------------------");
        printf("                          So luong                         ");
        printf("------------------------------------------------------");
        printf("\nSTT  Ma                    Ho va ten           Chuc vu                       Luong");
        for(i=0; i<count; i++)
        {
                printf("\n%d", i +1);
                printf("\t%s", Employee[i].Code);
                printf("\t%s", Employee[i].Name);
                switch(Employee[i].Positon) {
                        case DIRECTOR:
                                strcpy(pos,"Giam doc");
                                break;
                        case CHIEF:
                                strcpy(pos,"Truong phong");
                                break;
                        case DEPUTYCHIEF:
                                strcpy(pos,"Pho phong");
                                break;
                        case WORKER:
                                strcpy(pos,"Nhan vien");
                                break;
                }
                printf("\t%s", pos);
                printf("\t%8.2lf", Salary(Employee[i].Positon, Employee[i].StaticSalary));
        }
        printf("\n----------------------------------------------------");
}

/* Hien thi luong chi tiet */
void    SalaryDetail()
{
        int i;
        printf("----------------------------------------------------");
        printf("                    Luong chi tiet                  ");
        printf("----------------------------------------------------");
        printf("\nSTT  Ma                 Ho va ten        Luong cung                Luong");
        for(i=0; i<count; i++)
        {
                printf("\n%d", i +1);
                printf("\t%s", Employee[i].Code);
                printf("\t%s", Employee[i].Name);
                printf("\t%8.2f", Employee[i].StaticSalary);
                printf("\t%8.2f", Salary(Employee[i].Positon, Employee[i].StaticSalary));
        }
        printf("----------------------------------------------------");
}

/* Cung cap chuc nang them moi mot nhan vien */
void AddEmp()
{
        EMPLOYEE tmp;
        char c;

        do {
                flushall();
                printf("\n----------------------------------");
                printf("\nNhap vao thong tin cua nhan vien");
                printf("\n(1. Giam doc, 2. Truong phong, 3. Pho phong, 4. Nhan vien)");
                printf("\n- Ma nhan vien: "); gets(tmp.Code);
                printf("-   Ho va ten: "); gets(tmp.Name);
                printf("-    Ngay sinh: "); gets(tmp.BirthDay);
                printf("-      Dia chi: "); gets(tmp.Address);
                printf("-   Dien thoai: "); gets(tmp.Tel);
                printf("-        Luong: "); scanf("%f", &tmp.StaticSalary);
                printf("-      Cap bac: "); scanf("%d", &tmp.Positon);
                printf("\n\n Du lieu da duoc cap nhat");
                printf("\--------------------------------");

                Employee[count] = tmp;
                count++;

                printf("\nBan co muon nhap tiep hay khong (C\K): ");
                c = getch();
        } while(toupper(c) != 'K');
}

/* Cung cap chuc nang sua doi thong tin */
void UpdateEmp(int Index)
{
        printf("\n--------------------------------");
        printf("Thong tin cu");
        Display(Employee[Index]);
        flushall();
        printf("\n--------------------------------");
        printf("\nNhap vao thong tin cua nhan vien");
        printf("\n(1. Giam doc, 2. Truong phong, 3. Pho phong, 4. Nhan vien)");
        printf("\n- Ma nhan vien: "); gets(Employee[Index].Code);
        printf("-    Ho va ten: "); gets(Employee[Index].Name);
        printf("-    Ngay sinh: "); gets(Employee[Index].BirthDay);
        printf("-      Dia chi: "); gets(Employee[Index].Address);
        printf("-   Dien thoai: "); gets(Employee[Index].Tel);
        printf("-        Luong: "); scanf("%f", &Employee[Index].StaticSalary);
        printf("-      Cap bac: "); scanf("%d", &Employee[Index].Positon);
        printf("\n\n Du lieu da duoc cap nhat");
        printf("\n--------------------------------");
}

/* Xoa bo thong tin cua mot nhan */
void DeleteEmp(int Index)
{
        int i;
        for(i=Index; i<count; i++)
        {
                strcpy(Employee[Index].Code, Employee[Index + 1].Code);
                strcpy(Employee[Index].Name, Employee[Index + 1].Name);
                strcpy(Employee[Index].BirthDay, Employee[Index + 1].BirthDay);
                strcpy(Employee[Index].Address, Employee[Index + 1].Address);
                strcpy(Employee[Index].Tel, Employee[Index + 1].Tel);
                Employee[Index].StaticSalary = Employee[Index + 1].StaticSalary;
                Employee[Index].Positon = Employee[Index + 1].Positon;
        }

        count--;
        printf("\n\n Du lieu da duoc cap nhat");
        printf("\n--------------------------");
}
```

```
/*
Tinh luong bao gom ca phu cap
Params:
        - vPosition: thong tin ve vi tri trong cong ty
        - vStaticSalary: luong cung
Return:
        float Salary: StaticSalary + BENEFIT * %
*/
float   Salary(int vPosition, float vStaticSalary)
{
        float tmpSalary;

        switch(vPosition)
        {
                case DIRECTOR:
                        tmpSalary = vStaticSalary + (BENEFIT * DIRECTOR_BENEFIT);
                        break;
                case CHIEF:
                        tmpSalary = vStaticSalary + (BENEFIT * CHIEF_BENEFIT);
                        break;
                case DEPUTYCHIEF:
                        tmpSalary = vStaticSalary + (BENEFIT * DEPUTYCHIEF_BENEFIT);
                        break;
                case WORKER:
                        tmpSalary = vStaticSalary + (BENEFIT * WORKER_BENEFIT);
                        break;
        }

        return tmpSalary;
}

/*
Tim nhan vien qua ma
Params:
        - vCode: chua ma nhan vien
Return:
        int FindByCode: vi tri cua ban ghi trong mang
*/
int             FindByCode(char vCode[])
{
        int i;
        int tmpReturn = -1;

        for(i=0; i < count; i++)
        {
                if(strcmp(Employee[i].Code, vCode) == 0)
                {
                        tmpReturn = i;
                }
        }

        return tmpReturn;
}

/*
```

```
Tim nhan vien qua ten
Params:
        - vName: chua ten nhan vien
Return:
        - int FindByName: vi tri cua ban ghi trong mang
*/
int             FindByName(char vName[])
{
        int i;
        int tmpReturn = -1;

        for(i=0; i < count; i++)
        {
                if(strcmp(Employee[i].Name, vName) == 0)
                {
                        tmpReturn = i;
                }
        }

        return tmpReturn;
}

/* Chuc nang hien thi thong tin ve 1 nhan vien */
void    DisplayEmployee()
{
        int i;
        char vCode[10];

        flushall();
        printf("\n-------------------------------");
        printf("\nNhap vao ma nhan vien: ");
        gets(vCode);

        i = FindByCode(vCode);
        if(i!=-1)
        {
                Display(Employee[i]);
        }
        else
        {
                printf("\n Khong tim thay nhan vien co ma nhu tren");
                printf("\n-------------------------------------");
        }
}

/* Chuc nang cap nhat thong tin cua mot nhan vien */
void    UpdateEmployee()
{
        int i;
        char vCode[10];

        flushall();
        printf("\n---------------------");
        printf("\nNhap vao ma nhan vien: ");
        gets(vCode);
```

```
		i = FindByCode(vCode);
		if(i!=-1)
		{
			UpdateEmp(i);
		}
		else
		{
			printf("\n Khong tim thay nhan vien co ma nhu tren");
		}
}

/* Chuc nang xoa bo thong tin cua 1 nhan vien */
void	DeleteEmployee()
{
		int i;
		char vCode[10];

		flushall();
		printf("\n-----------------------");
		printf("\nNhap vao ma nhan vien: ");
		gets(vCode);

		i = FindByCode(vCode);
		if(i!=-1)
		{
			DeleteEmp(i);
		}
		else
		{
			printf("\n Khong tim thay nhan vien co ma nhu tren");
			printf("\n----------------------------------------");
		}
}

/* Tim thong tin cua nhan vien theo ma */
void	FindCode()
{
		int i;
		char vCode[10];

		flushall();
		printf("\n------------------------------");
		printf("\nNhap vao ma nhan vien de tim: ");
		gets(vCode);

		i = FindByCode(vCode);
		if(i!=-1)
		{
			Display(Employee[i]);
		}
		else
		{
			printf("\n Khong tim thay nhan vien co ma nhu tren");
			printf("\n----------------------------------------");
		}
}
```

```
/* Tim thong tin nhan vien theo ten */
void    FindName()
{
        int i;
        char vName[30];

        flushall();
        printf("\n-------------------------------");
        printf("\nNhap vao ten nhan vien de tim: ");
        gets(vName);

        i = FindByName(vName);
        if(i!=-1)
        {
                Display(Employee[i]);
        }
        else
        {
                printf("\n Khong tim thay nhan vien co ma nhu tren");
                printf("\n----------------------------------------");
        }
}
/******************************************************************/
/* End Implementation Function Prototype                          */
/******************************************************************/
```