INTRODUCTION:

What is EMS?

- Employee Management System is a distributed application, developed to maintain the details of employees working in any organization.
- The EMS has been developed to override the problems prevailing in the practicing manual system.
- It maintains the information about the personal and official details of the employees.

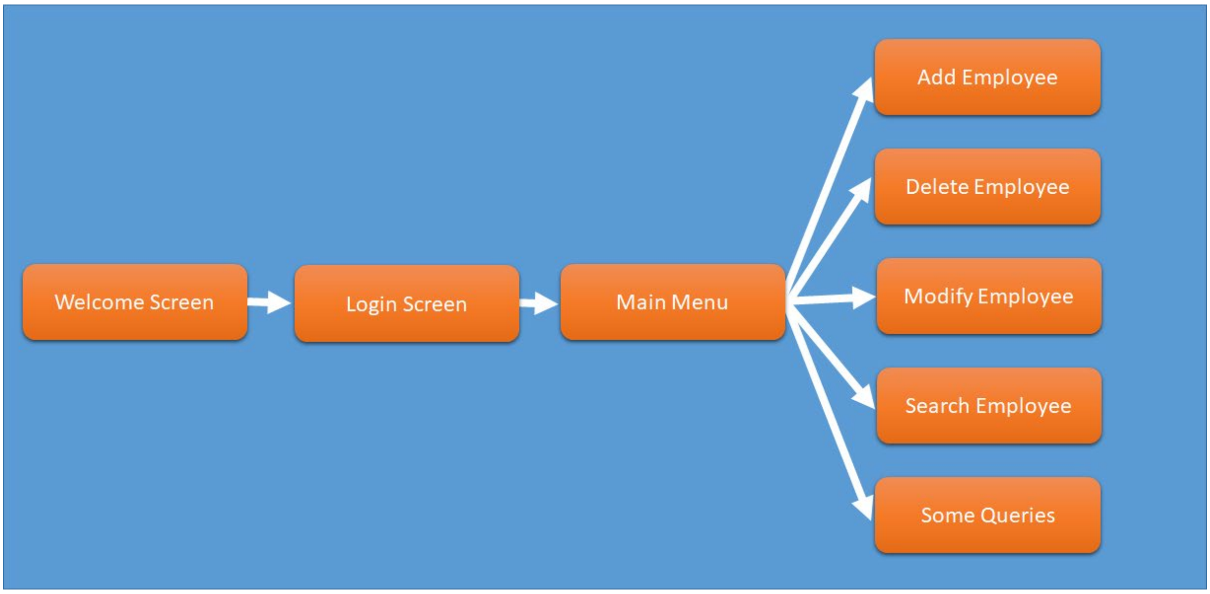
OBJECTIVES OF OUR PROJECT:

- This project aims to simplify the task of maintaining records of the employees of Company.
- To develop an well-designed database to store employee information.
- Provides full functional reports to management of Company.
- The objective of this project is to provide a comprehensive approach towards the management of employee information.

FEATURES :

- Proper Login Screen (Invisible Password Typing).
- Password Protected.
- Encrypted File (Binary).
- Easily Add, Delete, Modify Records.
- Various Essential Queries.

BASIC STRUCTURE :



FUNCTIONS AND CODE:

- Header files:
  - #include<stdio.h>
  - #include<string.h>
  - #include<stdlib.h>
  - #include<math.h>

- **Main Funtion:**

Code:

```
int main()
{
 FILE * fp;
 Employee e;
int option;
char another;

if((fp=fopen("employeeInfo.txt","rb+"))==NULL)
{
    if((fp=fopen("employeeInfo.txt","wb+"))==NULL)
       {
           printf("can't open file");
           return 0;
       }
}
char username[10],password[10];
printHead();
welcome();
printHead();
printf("\n\t\t\t\t  Login Screen");
printf("\n\t\t\t      Enter Your Credential");
printf("\n\n\n\t\tUsername: ");
scanf("%s",username);
printf("\n\t\tPassword: ");
int i;
```

```
i=0;
     do
     {
          password[i] = getch();
          if(password[i] == 13 )
          {
               break;
          }
          else if(password[i]==8 && i>0)
          {
               printf("%c%c%c",8,32,8);
               i--;
          }
          else
          {
               printf("*");
               i++;
          }
     }while(password[i]!=13);
     password[i] = '\0';

if(((strcasecmp(username,"admin"))==0)&&((strcasecmp(passw
ord,"pass")==0)))
{
    while(1)
{
    printHead();
    printf("\n\t\t\t\tMain Menu");
    printf("\n\n\n");
    printf("\n\n\t\t\t1. Add Employee");
    printf("\n\n\t\t\t2. Delete Employee");
    printf("\n\n\t\t\t3. Modify Employee");
    printf("\n\n\t\t\t4. Display Employee List");
    printf("\n\n\t\t\t5. Search Record");
    printf("\n\n\t\t\t6. Display Basic Info");
    printf("\n\n\t\t\t7. Display Basic Contact Info");
    printf("\n\n\t\t\t8. List of Male Employee");
    printf("\n\n\t\t\t9. List of Female Employee");
    printf("\n\n\t\t\t10. List of Employee From Dhaka");
    printf("\n\n\t\t\t11. List of Employee From Others
District");
    printf("\n\n\t\t\t12. List of Employee of Main Branch");
    printf("\n\n\t\t\t13. List of Employee of Others
Branch");
    printf("\n\n\t\t\t0. EXIT");

    printf("\n\n\t\tEnter Your Option :--> ");
    scanf("%d",&option);

    switch(option)
    {
        case 0: return 1;
                break;
        case 1: add(fp);
                break;
        case 2: fp=del(fp);
                break;
        case 3: modify(fp);
                break;
        case 4: displayList(fp);
                break;
        case 5: searchRecord(fp);
                break;
        case 6: displaybasic(fp);
                break;
        case 7: basiccontact(fp);
                break;
        case 8: maleemp(fp);
                break;
        case 9: femaleemp(fp);
                break;
        case 10: frmdhaka(fp);
                break;
        case 11: frmors(fp);
                break;
        case 12: mainbr(fp);
                break;
        case 13: otherbr(fp);
                break;
        default: printf("\n\t\tYou Pressed wrong key");
                  printf("\n\t\tProgram terminated");
                  getch();
                  exit(0);
```

```
    }
}
}
else {
    printf("\n\t\tLogin Failed");
}
return 1;
}
```

- **Funtion For Add Employee Record:**

Code:

```
void add(FILE * fp)
{
printHead();

printf("\n\t\t\t\Add Employee");
char another='y';
Employee e;

fseek(fp,0,SEEK_END);
while(another=='y'||another=='Y')
{
    printf("\n\n\t\tEnter ID number: ");
    scanf("%d",&e.id);

    printf("\n\n\t\tEnter Full Name of Employee: ");
    fflush(stdin);
    fgets(e.name,100,stdin); //fgets takes an extra \n
character as input
    e.name[strlen(e.name)-1]='\0';



    printf("\n\n\t\tEnter Designation: ");
    fflush(stdin);
    fgets(e.desgn,10,stdin); //fgets takes an extra \n
character as input
    e.desgn[strlen(e.desgn)-1]='\0';



    printf("\n\n\t\tEnter Gender: ");
    fflush(stdin);
    fgets(e.gender,10,stdin); //fgets takes an extra \n
character as input
    e.gender[strlen(e.gender)-1]='\0';

    printf("\n\n\t\tEnter Branch: ");
    fflush(stdin);
    fgets(e.branch,50,stdin);
    e.branch[strlen(e.branch)-1]='\0';



    printf("\n\n\t\tEnter Salary: ");
    scanf("%f",&e.sal);

    printf("\n\n\t\tEnter Present Address: ");
    fflush(stdin);
    fgets(e.psaddr,200,stdin);
    e.psaddr[strlen(e.psaddr)-1]='\0';

    printf("\n\n\t\tEnter Permanant Address: ");
    fflush(stdin);
    fgets(e.prtaddr,200,stdin);
    e.prtaddr[strlen(e.prtaddr)-1]='\0';

    printf("\n\n\t\tEnter Phone: ");
    fflush(stdin);
    fgets(e.phone,50,stdin);
    e.phone[strlen(e.phone)-1]='\0';

    printf("\n\n\t\tEnter E-mail: ");
    fflush(stdin);
    fgets(e.mail,20,stdin);
    e.mail[strlen(e.mail)-1]='\0';

    fwrite(&e,sizeof(e),1,fp);

    printf("\n\n\t\tWant to enter another employee info (Y/N)\t");
    fflush(stdin);
    another=getchar();
}
}
```

- ### Function For Delete Employee Record:

Code:

```
FILE * del(FILE * fp)
{
 printHead();
printf("\n\t\t\t\Delete Employee");
Employee e;
int flag=0,tempid,siz=sizeof(e);
FILE *ft;

if((ft=fopen("temp.txt","wb+"))==NULL)
{
    printf("\n\n\t\t\t\\t!!! ERROR !!!\n\t\t");
    system("pause");
     return fp;
}

printf("\n\n\tEnter ID number of Employee to Delete the
Record");
printf("\n\n\t\t\tID No. : ");
scanf("%d",&tempid);

rewind(fp);



while((fread(&e,siz,1,fp))==1)
{
    if(e.id==tempid)
    { flag=1;
    printf("\n\tRecord Deleted for");

printf("\n\n\t\t%s\n\n\t\t%s\n\n\t\t%d\n\t",e.name,e.branc
h,e.id);
    continue;
    }

    fwrite(&e,siz,1,ft);
}


fclose(fp);
fclose(ft);

remove("employeeInfo.txt");
rename("temp.txt","employeeInfo.txt");

if((fp=fopen("employeeInfo.txt","rb+"))==NULL)
{
    printf("ERROR");
    return  NULL;
}

if(flag==0) printf("\n\n\t\t!!!! ERROR RECORD NOT FOUND
\n\t");

printChar('-',65);
printf("\n\t");
```

```
system("pause");
return fp;
}
```

➢ Function For Modify Employee Record:

Code:

```
void modify(FILE * fp)
{
printHead();
printf("\n\t\t\tModify Employee");
Employee e;
int i,flag=0,tempid,siz=sizeof(e);
float sal;

printf("\n\n\tEnter ID Number of Employee to Modify the
Record : ");
scanf("%d",&tempid);

rewind(fp);

while((fread(&e,siz,1,fp))==1)
{
    if(e.id==tempid)
        {flag=1;
        break;
        }
}
```

```
if(flag==1)
    {
    fseek(fp,-siz,SEEK_CUR);
    printf("\n\n\t\tRecord Found");
    printf("\n\n\t\tEnter New Data for the Record");

     printf("\n\n\t\tEnter ID number: ");
    scanf("%d",&e.id);

    printf("\n\n\t\tEnter Full Name of Employee: ");
    fflush(stdin);
    fgets(e.name,100,stdin); //fgets takes an extra \n character as input
    e.name[strlen(e.name)-1]='\0';



    printf("\n\n\t\tEnter Designation: ");
    fflush(stdin);
    fgets(e.desgn,10,stdin); //fgets takes an extra \n character as input
    e.desgn[strlen(e.desgn)-1]='\0';



    printf("\n\n\t\tEnter Gender: ");
    fflush(stdin);
    fgets(e.gender,10,stdin); //fgets takes an extra \n character as input
    e.gender[strlen(e.gender)-1]='\0';
```

```
printf("\n\n\t\tEnter Branch: ");
fflush(stdin);
fgets(e.branch,50,stdin);
e.branch[strlen(e.branch)-1]='\0';


printf("\n\n\t\tEnter Salary: ");
scanf("%f",&e.sal);

printf("\n\n\t\tEnter Present Address: ");
fflush(stdin);
fgets(e.psaddr,200,stdin);
e.psaddr[strlen(e.psaddr)-1]='\0';

printf("\n\n\t\tEnter Permanant Address: ");
fflush(stdin);
fgets(e.prtaddr,200,stdin);
e.prtaddr[strlen(e.prtaddr)-1]='\0';

printf("\n\n\t\tEnter Phone: ");
fflush(stdin);
fgets(e.phone,50,stdin);
e.phone[strlen(e.phone)-1]='\0';

printf("\n\n\t\tEnter E-mail: ");
fflush(stdin);
fgets(e.mail,20,stdin);
```

```
    e.mail[strlen(e.mail)-1]='\0';

    fwrite(&e,sizeof(e),1,fp);
}

else printf("\n\n\t!!!! ERROR !!!! RECORD NOT FOUND");

printf("\n\n\t");
system("pause");

}
```

- ## Function For Search Employee Record:

Code:

```
void searchRecord(FILE *fp)
{printHead();
printf("\n\t\t\t\Search Employee");
int tempid,flag,siz,i;
Employee e;
char another='y';

siz=sizeof(e);

while(another=='y'||another=='Y')
{
printf("\n\n\tEnter ID Number of Employee to search the
record : ");
scanf("%d",&tempid);
```

```
rewind(fp);

while((fread(&e,siz,1,fp))==1)
{
    if(e.id==tempid)
        {flag=1;
        break;
        }
}

if(flag==1)
    {
    printf("\n\t\tNAME : %s",e.name);
        printf("\n\n\t\tID : %d",e.id);
        printf("\n\n\t\tDESIGNATION : %s",e.desgn);
        printf("\n\n\t\tBRANCH : %s",e.branch);
        printf("\n\n\t\tSALARY: %.2f",e.sal);
        printf("\n\n\t\tPRESENT ADDRESS : %s",e.psaddr);
        printf("\n\n\t\tPERMANANT ADDRESS : %s",e.prtaddr);
        printf("\n\n\t\tPHONE : %s",e.phone);
        printf("\n\n\t\tE-MAIL : %s",e.mail);

        printChar('=',65);


}
else printf("\n\n\t\t!!!! ERROR RECORD NOT FOUND !!!!");
```

```
printf("\n\n\t\tWant to enter another search (Y/N)");
fflush(stdin);
another=getchar();
}
}
```

- **Function For Display List:**

Code:

```
void displayList(FILE * fp)
{   printHead();
printf("\n\t\t\t\List  of Employees");
    Employee e;
    int i,siz=sizeof(e);

    rewind(fp);

    while((fread(&e,siz,1,fp))==1)
    {
        printf("\n\n\t\tID : %d",e.id);
        printf("\n\n\t\tNAME : %s",e.name);
        printf("\n\n\t\tDESIGNATION : %s",e.desgn);
        printf("\n\n\t\tGENDER : %s",e.gender);
        printf("\n\n\t\tBRANCH : %s",e.branch);
        printf("\n\n\t\tSALARY : %.2f",e.sal);
        printf("\n\n\t\tPRESENT ADDRESS : %s",e.psaddr);
        printf("\n\n\t\tPERMANANT ADDRESS : 
%s",e.prtaddr);
```

```
        printf("\n\n\t\tPHONE : %s",e.phone);
        printf("\n\n\t\tE-MAIL : %s\n\n\t",e.mail);
        printChar('=',65);
    }
    printf("\n\n\n\t");
    printf("\n\n\t");
    system("pause");
}
```

FUTURE SCOPE:

- Add a system to create an account.
- Add printer in future.
- Give more advanced programs for the system including more facilities.
- Improve the program for more heavy Duties.

CONCLUSION:

Our project is strongly preferable for a proper management of Employees of an Organization. The security in our project is a very good point to be noted. The project is password