

Experiment Number 4

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Branch ::	CSE - IoT	Sec/Grp ::	1/A
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Subject ::	Adv Programming Lab	CODE ::	CSP-347

1. Aim :

Write a C++ program to read the a emp.dat file. Create new files such as Adm.dat, Sal.dat, Pro.dat, IT.dat respectively to store the employee details according to their department.

2. Task :

1. Write a C++ program to read the a emp.dat file.
2. Create new files such as Adm.dat, Sal.dat, Pro.dat, IT.dat respectively to store the employee details according to their department.

3. Algorithm :

1. Read emp.dat file for current entries
2. Take a number of entries
3. Enter them in respective files.
4. Save files.
5. Exit

4. Source Code :

```
#include <bits/stdc++.h>

char Employeefile[30] = "emp.dat";
char ITfile[20] = "IT.dat";
char Adminfile[25] = "Adm.dat";
char Prodfile[30] = "Pro.dat";
char Salesfile[30] = "Sal.dat";

class Employee
{
    int employeeID;
    char name[30];
    char address[60];
    int age;

public:
    char dept[15];
    void get();
    char *getdept()
    {
        return dept;
    }
};

void Employee::get()
{
    std::cout << "Enter Employee Id\t::\t";
    std::cin >> employeeID;
    std::cout << "Enter Name\t::\t";
    std::cin >> name;
    std::cout << "Enter Address\t::\t";
    std::cin >> address;
    std::cout << "Enter Department Name:(Admin/Sales/IT/Production)\t::\t";
    std::cin >> dept;
    std::cout << "Enter Age\t::\t";
    std::cin >> age;
    std::cout << std::endl;
}

void insert()
```

```
{
    Employee e;
    std::ofstream fout;

    fout.open("Employee.dat", std::ios::in | std::ios::out | std::ios::
        binary | std::ios::app | std::ios::ate);
    if (fout.fail())
    {
        std::cout << "Error::\tUnable to Open the File !!!" << std::endl;
        goto err;
    }

    e.get();

    fout.write((char *)&e, sizeof(e));

    if (fout.tellp() % sizeof(e) == 0)
    {
        std::cout << "Record Inserted !!!\n"
            << std::endl;
    }
    else
    {
        std::cout << "Insertion Failed !!!\n"
            << std::endl;
        goto err;
    }
}

err:
    fout.close();
}

void sort()
{
    Employee e;
    std::ofstream adm, sal, pro, it;
    std::ifstream fin;

    adm.open(Adminfile, std::ios::out | std::ios::binary | std::ios::app);
    sal.open(Salesfile, std::ios::out | std::ios::binary | std::ios::app);
    pro.open(Prodfile, std::ios::out | std::ios::binary | std::ios::app);
    it.open(ITfile, std::ios::out | std::ios::binary | std::ios::app);
    fin.open(Employeefile, std::ios::in | std::ios::binary);
```

```
while (fin.read((char *)&e, sizeof(e)))
{
    if (strcmp(e.getdept(), "Admin") == 0)
    {
        adm.write((char *)&e, sizeof(e));
        std::cout << "Record Inserted into ADMIN File!!!" << std::endl;
    }

    else if (strcmp(e.getdept(), "Sales") == 0)
    {
        sal.write((char *)&e, sizeof(e));
        std::cout << "Record Inserted into SALES File!!!" << std::endl;
    }

    else if (strcmp(e.getdept(), "IT") == 0)
    {
        it.write((char *)&e, sizeof(e));
        std::cout << "Record Inserted into IT File!!!" << std::endl;
    }

    else if (strcmp(e.getdept(), "Production") == 0)
    {
        pro.write((char *)&e, sizeof(e));
        std::cout << "Record Inserted into Production File!!!" << std::endl;
        ;
    }

    else
        std::cout << "Insert Correct Record!!!" << std::endl;
}

fin.close();
adm.close();
sal.close();
it.close();
pro.close();
}
```

```
int main()
{
    int n;
    std::cout << "Enter No. of Records::\t";
    std::cin >> n;

    for (int i = 0; i < n; i++)
        insert();

    sort();

    return 0;
}
```

5. Observations :

```
Enter No. of Records:: 5
Enter Employee Id      ::      000
Enter Name             ::      Anand
Enter Address          ::      India
Enter Department Name:(Admin/Sales/IT/Production)      ::      Admin
Enter Age              ::      20

Record Inserted !!!

Enter Employee Id      ::      001
Enter Name             ::      Rishabh
Enter Address          ::      USA
Enter Department Name:(Admin/Sales/IT/Production)      ::      IT
Enter Age              ::      19

Record Inserted !!!

Enter Employee Id      ::      002
Enter Name             ::      Fenris
Enter Address          ::      UK
Enter Department Name:(Admin/Sales/IT/Production)      ::      Sales
Enter Age              ::      22

Record Inserted !!!

Enter Employee Id      ::      003
Enter Name             ::      Lycaon
Enter Address          ::      Germany
Enter Department Name:(Admin/Sales/IT/Production)      ::      Production
Enter Age              ::      23

Record Inserted !!!

Enter Employee Id      ::      004
Enter Name             ::      Stiles
Enter Address          ::      China
Enter Department Name:(Admin/Sales/IT/Production)      ::      Productio
Enter Age              ::      22

Record Inserted !!!

Record Inserted into ADMIN File!!!
Record Inserted into IT File!!!
Record Inserted into SALES File!!!
Record Inserted into Production File!!!
Insert Correct Record!!!
```

Learning Outcomes :

- File I/O
- ofstream
- ifstream
- fstream

S. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			