Group A

Assignment No. 8

Date
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SYCOA124

1] Syntax to create & write file.

Create file Syntax:-

→ fstream name_file_object;

Write file Syntax:-

→ name_file.open ("file_name.txt", ios::out);
object

2] Syntax for reading file:-

file_object.open ("file_name.txt", ios::in);

3] Advantages of file handling:-

→ It helps in preserving the data or information generated after runnig the program.

Using files, we don't have to worry about storing data.

You can easily access any part of the code

CODE:

```
#include <iostream>
#include <iomanip>
#include <fstream>
using namespace std;

class employee
{
public:
    int id;
    string name;
    int age;
    string department, post;
    int salary;
    void employee_data(int q)
    {
        cout << "\n\t\tENTER DETAILS" << endl;
        id=q;
        cout << "\t\tenter name:";
        cin >> name;
        cout << "\t\tenter age:";
        cin >> age;
        cout << "\t\tenter department:";
        cin >> department;
        cout << "\t\tenter post:";
        cin >> post;
        cout << "\t\tenter salary:";
        cin >> salary;
        cout << endl;
    }
    void display()
    {
        cout << "\t\tId:" << id << endl;
        cout << "\t\tName:" << name << endl;
        cout << "\t\tAge:" << age << endl;
        cout << "\t\tDepartment:" << department << endl;
        cout << "\t\tPost:" << post << endl;
        cout << "\t\tSalary:" << salary << endl;
    }
    void insert(int p)
    {
        fstream f;
        f.open("pb18.dat", ios::in|ios::binary);
        if(!f)
        {
            cout << "\t\terror in opening the file." << endl;
        }
         else
```

```
        {
            f.read((char *)this, sizeof(*this));
            while (!f.eof())
            {
                if (id == p)
                {
                    cout<<"\t\tData with given id already exist"<<endl;
                    return ;
                }
                f.read((char *)this, sizeof(*this));
            }
            f.close();
        }
        f.open("pbl8.dat", ios::app|ios::out|ios::binary);
        employee_data(p);
        f.write((char *)this, sizeof(*this));
        f.close();
        cout << "\t\tData inserted" << endl;
    }
    void search()
    {
        int id1, count = 0;
        ifstream f;
        cout << "\t\tEnter id to search data:";
        cin >> id1;
        cout << endl;
        f.open("pbl8.dat", ios::in | ios::binary);
        if (!f)
        {

        }
        else
        {
            f.read((char *)this, sizeof(*this));
            while (!f.eof())
            {
                if (id == id1)
                {
                    cout << "\t\tDATA FOUND" << endl;
                    this->display();
                    count++;
                    break;
                }
                f.read((char *)this, sizeof(*this));
            }
            if (count == 0)
            {
                cout << "\t\tDATA NOT FOUND" << endl;
```

```
            }
            f.close();
        }
    }
    void removedata()
    {
        int id1, count = 0;
        ifstream f;
        ofstream f1;
        cout << "\t\tEnter id to delete data:";
        cin >> id1;
        cout << endl;
        f.open("pbl8.dat", ios::in | ios::binary);
        f1.open("pbl82.dat", ios::out | ios::binary);
        if (!f)
        {
            cout << "\t\terror in opening the file." << endl;
        }
        else
        {
            f.read((char *)this, sizeof(*this));
            while (!f.eof())
            {
                if (id != id1)
                {
                    f1.write((char *)this, sizeof(*this));
                }
                else
                {
                    count++;
                }
                f.read((char *)this, sizeof(*this));
            }
            f.close();
            f1.close();
            remove("pbl8.dat");
            rename("pbl82.dat", "pbl8.dat");
            if (count)
            {
                cout << "\t\tData deleted " << endl;
            }
            else
            {
                cout << "\t\tData not found" << endl;
            }
        }
    }
    void update()
```

```
{
    int id1, count = 0;
    fstream f, f1;
    cout << "\t\tEnter id to update data:";
    cin >> id1;
    cout << endl;
    f.open("pbl8.dat", ios::in | ios::binary | ios::out);
    f1.open("pbl82.dat", ios::out | ios::binary);
    if (!f)
    {
        cout << "\t\terror in opening the file." << endl;
    }
    else
    {
        f.read((char *)this, sizeof(*this));
        while (!f.eof())
        {
            if (id == id1 && count == 0)
            {
                this->employee_data(id1);
                f1.write((char *)this, sizeof(*this));
                count++;
                break;
            }
            else
            {
                f1.write((char *)this, sizeof(*this));
            }
            f.read((char *)this, sizeof(*this));
        }
        f.close();
        f1.close();
        remove("pbl8.dat");
        rename("pbl82.dat", "pbl8.dat");
        if (count == 1)
        {
            cout << "\t\tData updated" << endl;
        }
        else
        {
            cout << "\t\tData not found with given id" << endl;
        }
    }
}

void displayall()
{
    fstream f;
```

```
        f.open("pbl8.dat", ios::in | ios::binary | ios::app);
        cout << "\t\tThe data is as follow" << endl<<endl;
        if (!f)
        {
            cout << "\t\terror in opening the file." << endl;
        }
        else
        {
            f.read((char *)this, sizeof(*this));
            while (!f.eof())
            {
                this->display();
                cout << endl;
                f.read((char *)this, sizeof(*this));
            }
            f.close();
        }
    }

    void deletefile()
    {
        remove("pbl8.dat");
        cout << "\t\tFile deleted " << endl;
    }

    int menu()
    {
        int choice = 0,id1;
        while (1)
        {
            cout << "\n\t\tMENU" << endl
                 << "\t\t1)insert" << endl
                 << "\t\t2)search" << endl
                 << "\t\t3)delete" << endl
                 << "\t\t4)update" << endl
                 << "\t\t5)display" << endl
                 << "\t\t6)delete file" << endl
                 << "\t\t7)exit" << endl;
            cout << "\t\tEnter choice:";
            cin >> choice;
            cout << endl;
            switch (choice)
            {
            case 1:
                cout<<"\t\tEnter the id to insert data:";
                cin>>id1;
                insert(id1);
                break;
```

```
            case 2:
                search();
                break;
            case 3:
                removedata();
                break;
            case 4:
                update();
                break;
            case 5:
                displayall();
                break;
            case 6:
                deletefile();
                break;
            case 7:
                return 0;
                break;
            default:
                cout << "\t\twrong choice!!!" << endl;
                break;
            }
        }
    }
};

int main()
{
    cout << "\t\t........................." << endl;
    cout << "\t\t|   EMPLOYEE DATABASE   |" << endl;
    cout << "\t\t........................." << endl;
    employee p;
    p.menu();
    return 0;
}
```

OUTPUT:

```
.........................
|   EMPLOYEE DATABASE   |
.........................

MENU
1)insert
2)search
3)delete
4)update
5)display
6)delete file
7)exit
Enter choice:1

Enter the id to insert data:1

ENTER DETAILS
enter name:SARVESH
enter age:12
enter department:COMP
enter post:DEVL
enter salary:3000000

Data inserted
```

```
MENU
1)insert
2)search
3)delete
4)update
5)display
6)delete file
7)exit
Enter choice:2

Enter id to search data:1

DATA FOUND
Id:1
Name:SARVESH
Age:12
Department:COMP
Post:DEVL
Salary:3000000

MENU
1)insert
2)search
3)delete
4)update
5)display
6)delete file
7)exit
Enter choice:7
```