Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: ESFP-II (2CSE203)

PRACTICAL-11

AIM: - To learn about File Management in C++.

1. Make a menu driven program to scan, append, modify and view Employee records of a Binary file as follows:
Choose your choice
NOTE: one choice for one record(except viewing data)
1. Scanning initial records
2. Appending records
3. Modifying or append records
4. Viewing records
5. Exit

CODE:

```
#include <iostream>
#include <fstream>
static int totrec=0;
using namespace std;

void getDATA()
  {
     char name[20];
     int age;
     char lang[20];
     ofstream outfile;
     outfile.open("p11o1",ios::out);
     cout<<"\n\nPlease enter the details as per demand: -";
     cout<<"\nEnter name: ";
     cin>>name;
     outfile<<name<<endl;

     cout<<"\nEnter age: ";
     cin>>age;
     outfile<<age<<endl;

     cout<<"\nEnter preferred language: ";
     cin>>lang;
     outfile<<lang<<endl;
```

```
        totrec=totrec+1;

        outfile.close();

    }
void append()
    {
        char name[20];
        int age;
        char lang[20];
        ofstream outfile;
        outfile.open("p11o1",ios::app);
        cout<<"\n\nPlease enter the details as per demand: -";
        cout<<"\nEnter name: ";
        cin>>name;
        outfile<<name<<endl;

        cout<<"\nEnter age: ";
        cin>>age;
        outfile<<age<<endl;

        cout<<"\nEnter preferred language: ";
        cin>>lang;
        outfile<<lang<<endl;

        totrec=totrec+1;

        outfile.close();

    }
void modify()
    {
        char name[20];
        int age;
        char lang[20];
        ofstream outfile;
        outfile.open("p11o1",ios::ate);
        cout<<"\n\nPlease enter the details as per demand: -";
        cout<<"\nEnter name: ";
        cin>>name;
        outfile<<name<<endl;

        cout<<"\nEnter age: ";
        cin>>age;
```

```
        outfile<<age<<endl;

        cout<<"\nEnter preferred language: ";
        cin>>lang;
        outfile<<lang<<endl;

        totrec=totrec+1;

        outfile.close();
    }
void showDATA()
    {

        ifstream infile;
        infile.open("p11o1",ios::in);
        const int size=80;
        char line[size];
        int counter=totrec;
        while(counter > 0)
        {
            infile.getline(line,size);

            cout<<"\n\nNAME : "<<line<<endl;
            infile.getline(line,size);
            cout<<"AGE : "<<line<<endl;
            infile.getline(line,size);
            cout<<"LANGUAGE : "<<line<<endl;
            counter--;
        }
        infile.close();
    }

int main()
{
    while (totrec>=0)
    {
    int choice;
    cout<<"\nChoose your choice: ";
    cout<<"\n1. Scanning initial records";
    cout<<"\n2. Appending records";
    cout<<"\n3. Modifying or append records";
    cout<<"\n4. Viewing records";
    cout<<"\n5. Exit";
    cout<<"\n\nEnter your choice: ";
```

```
    cin>>choice;

    switch (choice)
      {
        case 1:
          getDATA();
          break;
        case 2:
          append();
          break;
        case 3:
          modify();
          break;
        case 4:
          showDATA();
          break;
        case 5:
          return 0;
          break;
        default:
          cout<<"ERROR!";
          return 0;
          break;
      }
    }
    return 0;
}
```

OUTPUT:

```
Enter your choice: 1


Please enter the details as per demand: -
Enter name: Yash

Enter age: 18

Enter preferred language: HTML

Choose your choice:
1. Scanning initial records
2. Appending records
3. Modifying or append records
4. Viewing records
5. Exit

Enter your choice: 2


Please enter the details as per demand: -
Enter name: ABD

Enter age: 32

Enter preferred language: Cpp

Choose your choice:
1. Scanning initial records
2. Appending records
3. Modifying or append records
4. Viewing records
5. Exit

Enter your choice: 4


NAME : Yash
AGE : 18
LANGUAGE : HTML


NAME : ABD
AGE : 32
LANGUAGE : Cpp

Choose your choice:
1. Scanning initial records
2. Appending records
3. Modifying or append records
4. Viewing records
5. Exit

Enter your choice:
```

2. A program to create a file which has information Name, Account number, Balance and perform following operations:

a. Add record

b. Display content of file

c. Display name of person having balance > 10,000.

CODE:

```
#include<iostream>
#include<stdio.h>
#include<string.h>
#include<cstdlib>
using namespace std;

struct Person
{
    char name[20];
    int accno;
    float balance;

};
int main()
{
    struct Person p;
    FILE *fp;
    char c;
    int ch;
    while(1)
    {
        cout<<"\n\n 1. Add Records in the File";
        cout<<"\n 2. Display Content of File";
        cout<<"\n 3. Display Name of Person whose Balance is Greater than 10,000";
        cout<<"\n 4. Exit";
        cout<<"\n\n Enter Your Choice : ";
        cin>>ch;
        switch(ch)
        {
            case 1:
                fp=fopen("person.txt","ab");
                while (1)
                {
                    cout<<"\n Enter Person Name   :  ";
                    cin>>p.name;
                    fflush(stdin);
                    cout<<"\n Enter Account No.   :  ";
```

```
            cin>>p.accno;
            fflush(stdin);

            cout<<"\n Enter Balance      :  ";
            cin>>p.balance;
            fflush(stdin);

            fwrite(&p,sizeof(p),1,fp);
            fflush(stdin);
            cout<<"\n\n Do You Want to Continue?(Y/N) : ";
            cin>>c;
            if(c=='n' || c=='N')
                break;
        }
        fclose(fp);
        break;

    case 2:
        fp=fopen("person.txt","rb");
        while (fread(&p,sizeof(p),1,fp))
        {
            while(1)
            {
                cout<<"\n Account No : "<<p.accno;
                cout<<"\n Name       : "<<p.name;
                cout<<"\n Balance    : "<<p.balance<<endl;
                break;
            }
        }
        fclose(fp);
        break;

    case 3:
        fp=fopen("person.txt","rb");
        while(fread(&p,sizeof(p),1,fp))
        {
            if(p.balance>10000)
            {

                while(1)
                {
                   cout<<"====================";
                    cout<<"\n Account No : "<<p.accno;
                    cout<<"\n Name       : "<<p.name;
```

```
                    cout<<"\n Balance    : "<<p.balance<<endl;
                    break;
                }

            }
        }
        fclose(fp);
        break;
    case 4:
        exit(0);
    default:
        cout<<"\n Invalid Choice";
    }
  }
  return 0;
}
```

OUTPUT:

```
1. Add Records in the File
2. Display Content of File
3. Display Name of Person whose Balance is Greater than 10,000
4. Exit

Enter Your Choice : 1

Enter Person Name   :  Yash

Enter Account No.   :  101

Enter Balance       :  100000


Do You Want to Continue?(Y/N) : y

Enter Person Name   :  ABC

Enter Account No.   :  102

Enter Balance       :  20000


Do You Want to Continue?(Y/N) : n


1. Add Records in the File
2. Display Content of File
3. Display Name of Person whose Balance is Greater than 10,000
4. Exit

Enter Your Choice : 2

Account No : 101
Name       : Yash
Balance    : 111000

Account No : 101
Name       : Jinay
Balance    : 120

Account No : 101
Name       : Yash
Balance    : 100000

Account No : 102
Name       : ABC
Balance    : 20000
```

```
1. Add Records in the File
2. Display Content of File
3. Display Name of Person whose Balance is Greater than 10,000
4. Exit

Enter Your Choice : 3
====================
Account No : 101
Name       : Yash
Balance    : 111000
====================
Account No : 101
Name       : Yash
Balance    : 100000
====================
Account No : 102
Name       : ABC
Balance    : 20000


1. Add Records in the File
2. Display Content of File
3. Display Name of Person whose Balance is Greater than 10,000
4. Exit

Enter Your Choice : 4
PS C:\Users\admin\Google Drive\B-Tech\SEM-2\ESFP-2\ESFP-Practicals\Prac-11>
```


Post Practical Task

1. Write a Menu driven telephone directory program (Binary File handling) having following:

*******Phone Book*******

1) Add New Record

2) Display All Records

3) Search Telephone No.

4) Search Person Name

5) Update Telephone No.

6) Exit

CODE:

```
#include<iostream>
#include<fstream>
#include<string.h>
using namespace std;
class A{
        public:
        long long int num;
```

```
        char name[20];
};

fstream fp;
A st;

void first(){
        fp.open("PB.txt",ios::out | ios::binary | ios::app);
        char ch='y';
        while(ch=='y'){
        cout<<"Enter name : ";
        cin>>st.name;
        cout<<"Enter phone no. : ";
        cin>>st.num;
        cout<<endl;
        fp.write((char*)&st,sizeof(st));
   cout<<"Do you want to continue (y/n) : ";
        cin>>ch;
        cout<<endl;
}
        fp.close();
}

void second(){
        fp.open("PB.txt",ios::in | ios::binary);
        while(fp.read((char*)&st,sizeof(st))){
                cout<<"NAME : "<<st.name<<endl;
                cout<<"PHONE NO. : "<<st.num<<endl;
                cout<<endl;
        }
        fp.close();
}

void third(){
        fp.open("PB.txt",ios::out | ios::in | ios::binary);
        long long int a;
        int clk=0;
        cout<<"Enter the number you want to search : ";
        cin>>a;
        cout<<endl;
        while(fp.read((char*)&st,sizeof(st))){
                if(st.num==a){
                cout<<"NAME : "<<st.name<<endl;
                cout<<"PHONE NO. : "<<st.num<<endl;
```

```
                cout<<endl;
                clk=1;
        }
        }
        fp.close();
        if(clk==0)
        {
                cout<<"Number not found";
        }
}

void fourth(){
        fp.open("PB.txt",ios::out | ios::in | ios::binary);
        char a[20];
        int clk=0;
        cout<<"Enter the name you want to search : ";
        cin>>a;
        cout<<endl;
        while(fp.read((char*)&st,sizeof(st))){
                if(strcmp(st.name,a)==0){
                cout<<"NAME : "<<st.name<<endl;
                cout<<"PHONE NO. : "<<st.num<<endl;
                cout<<endl;
                clk=1;
        }
        }
        fp.close();
        if(clk==0)
        {
                cout<<"Data not found";
        }
}

void fifth(){
        fp.open("PB.txt",ios::binary | ios::in | ios::out);
        fp.seekg(0);
        long long int a;
        int clk=0;
        cout<<"Enter number for search : ";
        cin>>a;
        cout<<endl;
        while(fp.read((char*)&st,sizeof(st))){
                if(st.num==a){
                  cout<<"NAME : "<<st.name<<endl;
```

```
                cout<<"PHONE NO. : "<<st.num<<endl;
                cout<<endl;
                clk=1;
                cout<<"**Enter new data to update**"<<endl;
                cout<<"Enter name : ";
                cin>>st.name;
                cout<<endl;
                cout<<"Enter phone no. : ";
                cin>>st.num;
                cout<<endl;
                fp.seekp(-sizeof(st),ios::cur);
        fp.write((char *)&st,sizeof(st));
                }
        }
        fp.close();
        if(clk==0){
                cout<<"Data not found";
        }
        fp.open("PB.txt",ios::binary | ios::in);
        while(fp.read((char*)&st,sizeof(st))){
                cout<<"NAME : "<<st.name<<endl;
           cout<<"PHONE NO. : "<<st.num<<endl;
                cout<<endl;
        }
        fp.close();
}

int main()
{
        int choice;
        while(1){
        cout<<"**Phone Book**"<<endl;
        cout<<"1) Add New Record"<<endl;
        cout<<"2) Display All Records"<<endl;
        cout<<"3) Search Telephone No."<<endl;
        cout<<"4) Search Person Name"<<endl;
        cout<<"5) Update Telephone No."<<endl;
        cout<<"6) Exit"<<endl<<endl;
        cout<<"Enter your choice : ";
        cin>>choice;
        cout<<endl;
        switch(choice)
        {
                case 1 :
```

```
                first();
                break;

            case 2 :
                second();
                break;

            case 3 :
                third();
                break;

            case 4 :
                fourth();
                break;

            case 5 :
                fifth();
                break;

            case 6 :
               exit(0);

            default :
               cout<<"Invalid choice";
        }
}
return 0;
}
```

OUTPUT:

```
**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
4) Search Person Name
5) Update Telephone No.
6) Exit

Enter your choice : 1

Enter name : Yash
Enter phone no. : 7285850155

Do you want to continue (y/n) : y

Enter name : ABC
Enter phone no. : 1234567890

Do you want to continue (y/n) : n

**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
4) Search Person Name
5) Update Telephone No.
6) Exit

Enter your choice : 2

NAME : Yash
PHONE NO. : 7285850155

NAME : ABC
PHONE NO. : 1234567890

**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
4) Search Person Name
5) Update Telephone No.
6) Exit

Enter your choice : 3

Enter the number you want to search : 7285850155

NAME : Yash
PHONE NO. : 7285850155

**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
```

```
**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
4) Search Person Name
5) Update Telephone No.
6) Exit

Enter your choice : 4

Enter the name you want to search : ABC

NAME : ABC
PHONE NO. : 1234567890

**Phone Book**
1) Add New Record
2) Display All Records
3) Search Telephone No.
4) Search Person Name
5) Update Telephone No.
6) Exit

Enter your choice : 5

Enter number for search : 1234567890

NAME : ABC
PHONE NO. : 1234567890

**Enter new data to update**
Enter name : DEFGH

Enter phone no. : 1234567890

NAME : Yash
PHONE NO. : 7285850155

NAME : ABC
PHONE NO. : 1234567890
```


2. What is the output of this program?
Note: Includes all required header files

```
using namespace std;
int main ()
{
```

```
int l;
char * b;
ifstream i;
i.open ("find.txt", ios :: binary );
i.seekg (0, ios :: end);
l = i.tellg();
i.seekg (0, ios :: beg);
b = new char [l];
i.read (b, l);
i.close();
cout.write (b, l);
delete[] b;
return 0;
}
```

A. Error
B. find
C. This is find
D. Runtime error

3. **What is the output of this program?**
Note:Includes all required header files

```
using namespace std;
int main ()
{
char fine, course;
cout << "Enter a word: ";
fine = cin.get();
cin.sync();
course = cin.get();
cout << fine << endl;
cout << course << endl;
return 0;
}
```

A. course
B. fine
C. Returns fine 2 letter or number from the entered word
D. None of the mentioned