

JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY NOIDA

**BTECH | SEMESTER-2 |
SOFTWARE DEVELOPMENT LAB– II [15B17CI271]**



REPORT FOR MINI GROUP PROJECT

CONTACT MANAGEMENT SYSTEM

TEAM

BATCH: B-14
BRANCH: IT
YEAR: 1
SEMESTER: 2 (EVEN)

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ACKNOWLEDGEMENT...

*It gives us a great sense of pleasure to present the report of the B.Tech Project Undertaken during B.Tech, FirstYear. We owe a special debt of gratitude to **Dr. Parul Agarwal** - Assistant Professor (Senior Grade) for her constant support and guidance throughout our work. Her sincerity, thoroughness, and perseverance have been a constant source of inspiration for us. It is only her cognizant efforts that our endeavours have seen the light of the day.*

At last, we would like to extend our heartfelt thanks to our parents because without their help this project would not have been successful. Finally, we would like to thank my dear friends who have been with me all the time.

~TEAM

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CHAPTER-1: INTRODUCTION

1.

The CONTACT MANAGEMNET SYSYTEM is designed in 'C++' language.

2.

This system is based on a concept to store and generate all the records of the Personal or an Organization's Contact.

3.

A simple database of contacts in an office, an organization where the user can add Contact details safely and it's not time-consuming.

4.

Easy to store records of each.

5.

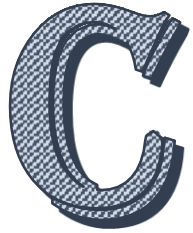
Add personal details, view a list of it, modify and remove the details.

6.

Convenient to operate and understand by the users.

1.

CHAPTER-2: FEATURES



1. The project provides file handling, data structure, functions, and pointer which makes this simple C++ mini-project.
2. The user can add new contacts with information such as name, phone number, address, and email.
3. List all contacts: lists all the contacts stored in a file with their respective contact details.
4. Edit contacts: edit information given while adding the contacts
5. Search contacts: based on name and phone number
6. Developed using the C++ language.
7. Delete contacts: delete contacts from a file.



CHAPTER-3: C++ PROGRAMMING

WHY C++?...

C++ is a cross-platform language that can be used to create high-performance applications. C++ was developed by Bjarne Stroustrup, as an extension to the C language. C language is not efficient enough to tackle up the situation of data security, therefore C++ is much better option for this project.

WHY THIS PROJECT ?...

- ❑ The reason for which we have chosen this project is due to its simplicity and inclination to the topic we have studied so far. Contact Management is something which requires fast execution and fast data handling which can be certainly achieved using C++.
- ❑ Moreover, as a group activity it is a perfect project to learn about the important concepts of Object Oriented Programming (OOPS) in C++ in a much more fun and creative manner.

TOPICS OF THE SDF-2 USED...

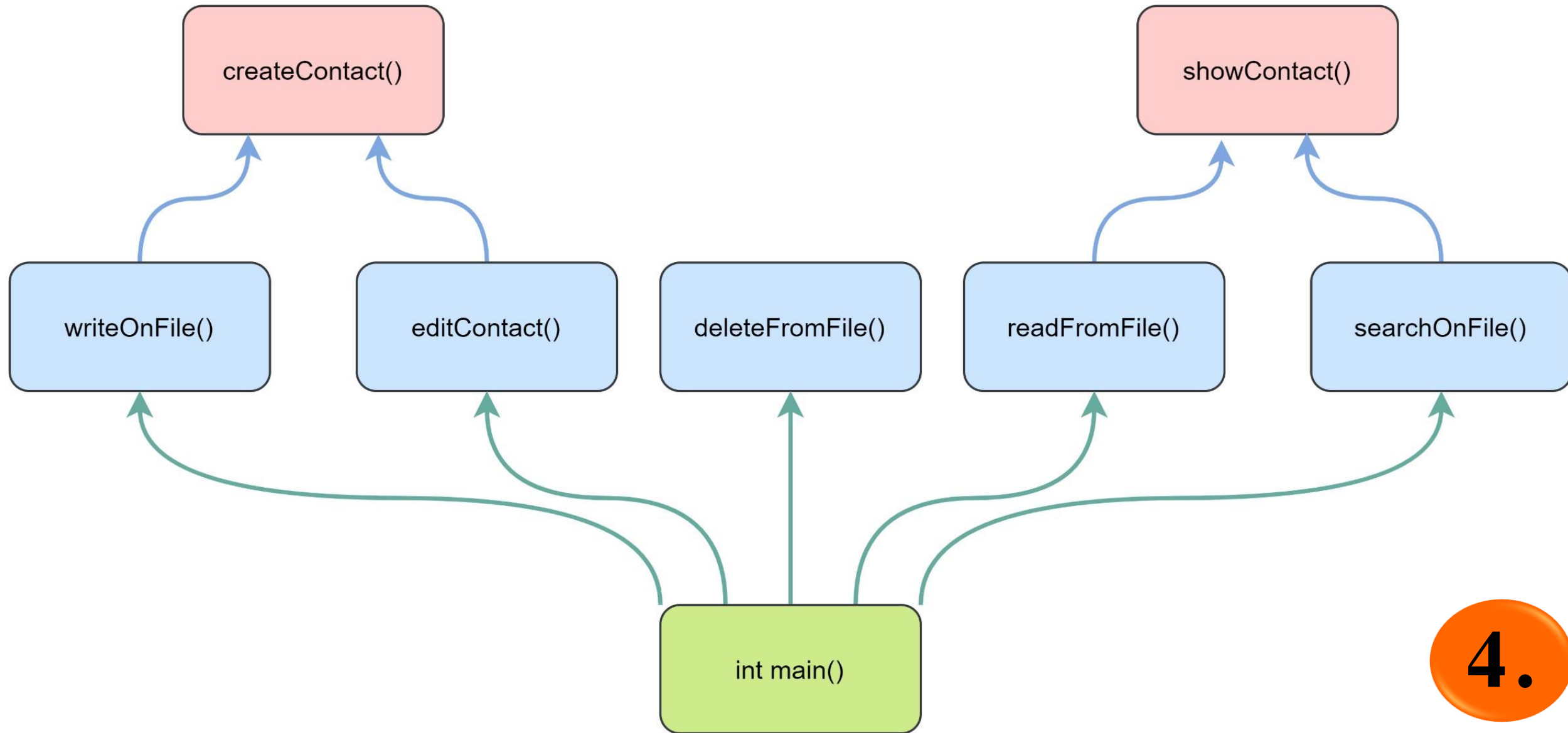
Our project has almost all fundamental aspects of C++ programming but Object Oriented Programming has been our major area of interest throughout the activity. We have been trying our best to incorporate the fundament features of the Object Oriented Philosophy.

- ❖ Class and Objects
- ❖ File Handling



Bjarne Stroustrup

CHAPTER-4: DESIGN & IMPLEMENTATION



CHAPTER-5:SOURCE CODE...

```
#include<fstream>
#include<conio.h>
#include<string.h>
#include<iomanip>
#include<iostream>
using namespace std;
class contact
{
    long ph;
    char name[20],add[20],email[30];

public:
    void create_contact()
    {
        cout<<"Phone: ";
        cin>>ph;

        cout<<"Name: ";
        cin.ignore();
        cin>>name;

        cout<<"Address: ";
        cin.ignore();
        cin>>add;

        cout<<"Email address: ";
        cin.ignore();
        cin>>email;

        cout<<"\n";
    }

    void show_contact()
    {
        cout<<endl<<"Phone #: "<<ph;
        cout<<endl<<"Name: "<<name;
        cout<<endl<<"Address: "<<add;
        cout<<endl<<"Email Address: "<<email;
    }
}
```

```
fstream fp;

contact cont;


void save_contact()
{
    fp.open("contactBook.dat",ios::out|ios::app);
    cont.create_contact();
    fp.write((char*)&cont,sizeof(contact));
    fp.close();
    cout<<endl<<endl<<"Contact Has Been Sucessfully Created...";
    getchar();
}


void show_all_contacts()
{
    system("cls");

    cout<<"\n\t\t===== \n\t\t\tLIST OF CONTACTS\n\t\t\t=====\n";

    fp.open("contactBook.dat",ios::in);
    while(fp.read((char*)&cont,sizeof(contact)))
    {
```

```

cont.show_contact();
{
    if(cont.getPhone()==num)
    {
        system("cls");
        cont.show_contact();
        found=true;
    }
}

void display_contact(int num)
{
    bool found;
    int ch;

    found=false;

    fp.open("contactBook.dat",ios::in);
    while(fp.read((char*)&cont,sizeof(contact)))
        cout<<endl<<"=====
=====\\n"<<endl;
    }
    fp.close();
}

void edit_contact()
{
    fp.close();
    if(found == false){
        cout<<"\\n\\nNo record found...";}
    getchar();
}

```

```

{
    int num;
    bool found=false;
    system("cls");
    cout<<"...:Edit
contact\n=====\\n\\n\\t...:Enter the number of contact to
edit:";
    cin>>num;
    fp.open("contactBook.dat",ios::in|ios::out);
    while(fp.read((char*)&cont,sizeof(contact)) && found==false)
    {
        if(cont.getPhone()==num)
        {
            cont.show_contact();

            cout<<"\\nPlease Enter The New Details of Contact: "<<endl;

            cont.create_contact();

            int pos=-1*sizeof(cont);

            fp.seekp(pos,ios::cur);

            fp.write((char*)&cont,sizeof(cont));

            cout<<endl<<endl<<"\\t Contact Successfully
Updated...";

            found=true;

        }

    }

    fp.close();
    if(found==false)
        cout<<endl<<endl<<"Contact Not Found...";

}

```

```

void delete_contact()
{
    int num;
    system("cls");
    cout<<endl<<endl<<"Please Enter The contact #: ";
    cin>>num;
    fp.open("contactBook.dat",ios::in|ios::out);
    fstream fp2;
    fp2.open("Temp.dat",ios::out);
    fp.seekg(0,ios::beg);
    while(fp.read((char*)&cont,sizeof(contact)))
    {
        if(cont.getPhone()!=num)
        {
            fp2.write((char*)&cont,sizeof(contact));

        }

    }

    fp2.close();
    fp.close();
    remove("contactBook.dat");
    rename("Temp.dat","contactBook.dat");
    cout<<endl<<endl<<"\\tContact Deleted...";

}

```



```
cout<<"\\t\\t\\t\\t\\t*****\\t*****";
    cout<<"\\t\\t\\t\\t\\t*****\\t*****";
    cout<<"\\t\\t\\t\\t\\t*****\\t*****";
    cout<<"\\t\\t\\t\\t\\t*****\\t*****";
    cout<<"\\t\\t\\t\\t\\t*****\\t*****";
    cout<<"\\t\\t\\t\\t\\t****\\t****";
    cout<<"\\t\\t\\t\\t\\t***\\t***";
    cout<<"\\t\\t\\t\\t\\t**\\t**";
    cout<<"\\t\\t\\t\\t\\t*\\t*";
```

```
cin>>ch;

switch(ch)
{
    case 0: cout<<"\n\n\t\tThank you for using CMS...";
            exit(0);
            break;
    break;
    break;
    case 1:save_contact();
            break;
    case 2:show_all_contacts();
            break;
    case 3:
            int num;

    system("cls");
    cout<<"\n\n\tPhone: ";
    cin>>num;

            display_contact(num);
            break;
    case 4:edit_contact();
            break;
    case 5:delete_contact();
            break;
    default:
            break;
}
```

```
int opt;

cout<<"\n\n\n...:Enter the Choice:\n\n\t[1] Main Menu\t\t[0] Exit\n";

cin>>opt;

switch (opt)

{

case 1:

            system("cls");

            continue;

case 0:

            exit(0);

}

}

return 0;

}
```

CHAPTER- 5: OUTPUT SCREEN

```

main.cpp:135:14: warning: overflow in conversion from 'long unsigned int' to 'int' changes value from '1844674407370955
1536' to '-80' [-Woverflow]
    135 |     int pos=-1*sizeof(cont);
        |           ^^~^~~~~~
sh: 1: cls: not found
sh: 1: color: not found

          *      *                               **      **                               ***  *
          ****   ****                           *****  *****                          **********
          *****  *****                       *****  *****                          **********
          *****  *****                       *****  *****                          *****
          **      **                             **      **                               *      *

**** Welcome to Contact Management System ****


                MAIN MENU
            =====
[1] Add a new Contact
[2] List all Contacts
[3] Search for contact
[4] Edit a Contact
[5] Delete a Contact
[0] Exit
            =====
Enter the choice:
```

ADD A NEW CONTACT

```
sh: 1: color: not found

**** Welcome to Contact Management System ****

MAIN MENU
=====
[1] Add a new Contact
[2] List all Contacts
[3] Search for contact
[4] Edit a Contact
[5] Delete a Contact
[0] Exit
=====
Enter the choice:1

Phone:
1234567890
Name:
RAWAT
Address:
GHAZIABAD
Email address:
rawat.1234@gmail.com

Contact Has Been Sucessfully Created...

...:Enter the Choice:

[1] Main Menu      [0] Exit
```


LIST ALL CONTACTS

```
input
=====
[1] Add a new Contact
[2] List all Contacts
[3] Search for contact
[4] Edit a Contact
[5] Delete a Contact
[0] Exit
=====
Enter the choice:2
sh: 1: cls: not found

=====
LIST OF CONTACTS
=====

Phone #: 1
Name: 2
Address: 3
Email Address : 4
=====

Phone #: 1234567890
Name: SHUBHAM
Address: GHAZIABAD
Email Address : 1234.rawat@mail.com
=====
```

SEARCH FOR CONTACTS

```
input
**** Welcome to Contact Management System ****

MAIN MENU
=====
[1] Add a new Contact
[2] List all Contacts
[3] Search for contact
[4] Edit a Contact
[5] Delete a Contact
[0] Exit
=====
Enter the choice:3
sh: 1: cls: not found

Phone: 1234567890
sh: 1: cls: not found

Phone #: 1234567890
Name: SHUBHAM
Address: GHAZIABAD
sh: 1: cls: not found
Email Address : 1234.rawat@mail.com
Phone #: 1234567890
Name: RAWAT
Address: GHAZIABAD
Email Address : rawat.1234@gmail.com
```

EDIT A CONTACT

```
input
=====
[1] Add a new Contact
[2] List all Contacts
[3] Search for contact
[4] Edit a Contact
[5] Delete a Contact
[0] Exit
=====
Enter the choice:4
sh: 1: cls: not found
...:Edit contact
=====

...:Enter the number of contact to edit:1234567890

Phone #: 1234567890
Name: SHUBHAM
Address: GHAZIABAD
Email Address : 1234.rawat@mail.com
Please Enter The New Details of Contact:
Phone:
1134567890
Name:
SHUBHAM
Address:
NOIDA
Email address:
shubham.098@gmail.com

Contact Successfully Updated...

...:Enter the Choice:

[1] Main Menu      [0] Exit
```

DELETE A CONTACT

```
input
...:Enter the Choice:
      [1] Main Menu      [0] Exit
1
sh: 1: cls: not found
      **** Welcome to Contact Management System ****

      MAIN MENU
      =====
      [1] Add a new Contact
      [2] List all Contacts
      [3] Search for contact
      [4] Edit a Contact
      [5] Delete a Contact
      [0] Exit
      =====
      Enter the choice:5
sh: 1: cls: not found

Please Enter The contact #: 1134567890

      Contact Deleted...

...:Enter the Choice:
      [1] Main Menu      [0] Exit
0

...Program finished with exit code 0
Press ENTER to exit console.
```


ADVANTAGES...

- ❑ Since it is written in C++, it is fast and efficient .
- ❑ Convenient to operate and understand by others.
- ❑ User readability and data privacy due to OOPS.
- ❑ Functionalities can be easily expanded since programme is written in object oriented language.

V/S

DISADVANTAGES...

- ❑ Cannot add pictures to contacts.
- ❑ Cannot classify contacts into different categories such as favourite, important, work etc.
- ❑ Cannot add two or more numbers for the same person under same name.
- ❑ Not capable of telling whether the person uses WhatsApp.

FUTURE IMPROVEMENTS

- ☐ To add pictures in the contacts.
- ☐ To develop a mechanism to know whether the person uses WhatsApp.
- ☐ To add multiple numbers, addresses and e-mail ids to the same contact.
- ☐ To classify contacts under different categories.

CONCLUSION

- ☐ The project enabled us to understand the importance of C++ programming language through OOPS and File Handling.
- ☐ It also enabled us to understand that OOPS is much more powerful than structures in C language.
- ☐ It helped us to understand one of the most important feature of C++ language- File Handling.
- ☐ It enabled us to learn the importance of data privacy and data security through object oriented philosophy.
- ☐ It enabled us to work in group and solve the problem given to us. It taught us teams spirit and time management.
- ☐ Several improvements to the current programme can still be made.

REFERENCES

- ❑ <https://codeprojectz.com/applications-and-web-projects/contact-management-system-in-c-with-source-code/>
- ❑ <https://github.com/muradyf/contact-management-system#:~:text=Contact%20Management%20System-,A%20contact%20management%20system%20written%20in%20C%2B%2B%20that%20provides%20various,and%20writing%20a%20contact%20list.>
- ❑ <https://www.codeproject.com/Questions/5315219/Need-help-making-a-contact-management-system-in-Cp>