मेडी–केप्स विश्वविद्यालय, इन्दौर

Medi-Caps University, Indore

Object oriented programming project
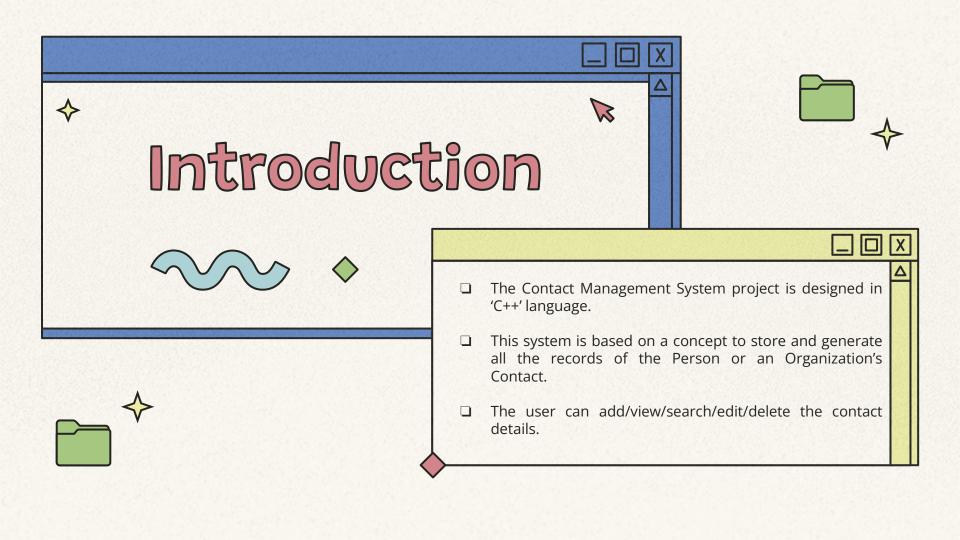
Topic : Contact Management System
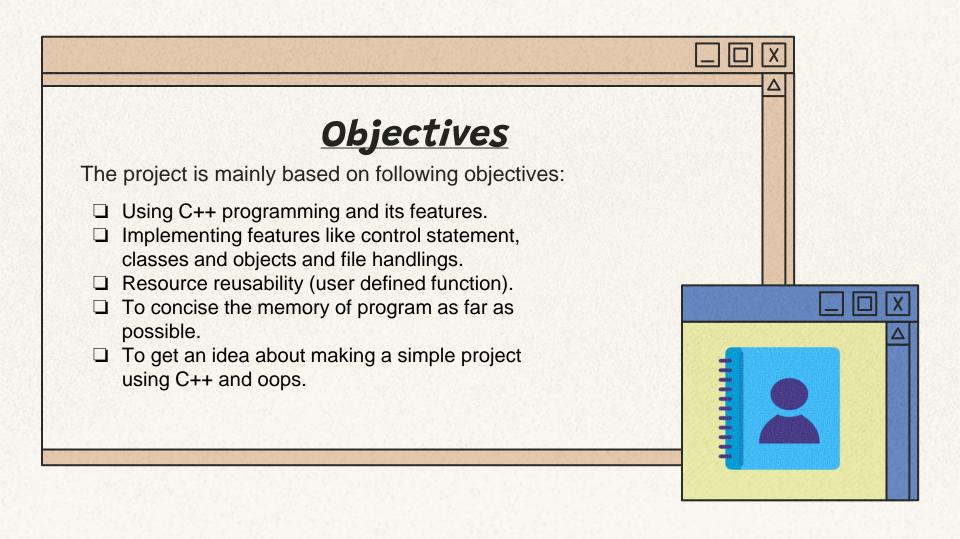
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Introduction

- ❏ The Contact Management System project is designed in 'C++' language.

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

- ❏ The user can add/view/search/edit/delete the contact details.

<u>Objectives</u>

The project is mainly based on following objectives:

- ❏ Using C++ programming and its features.
- ❏ Implementing features like control statement, classes and objects and file handlings.
- ❏ Resource reusability (user defined function).
- ❏ To concise the memory of program as far as possible.
- ❏ To get an idea about making a simple project using C++ and oops.

What is OOP?

- ❏ Combines attribute with functions/methods into a unit called *Object*.
- ❏ Class-based language.
- ❏ Data attribute/functions are defined as blueprint for an object.
- ❏ multiple object instantiated/represented from same class.
- ❏ Popular example of class-based OOP language include Java, Python, C++, etc.
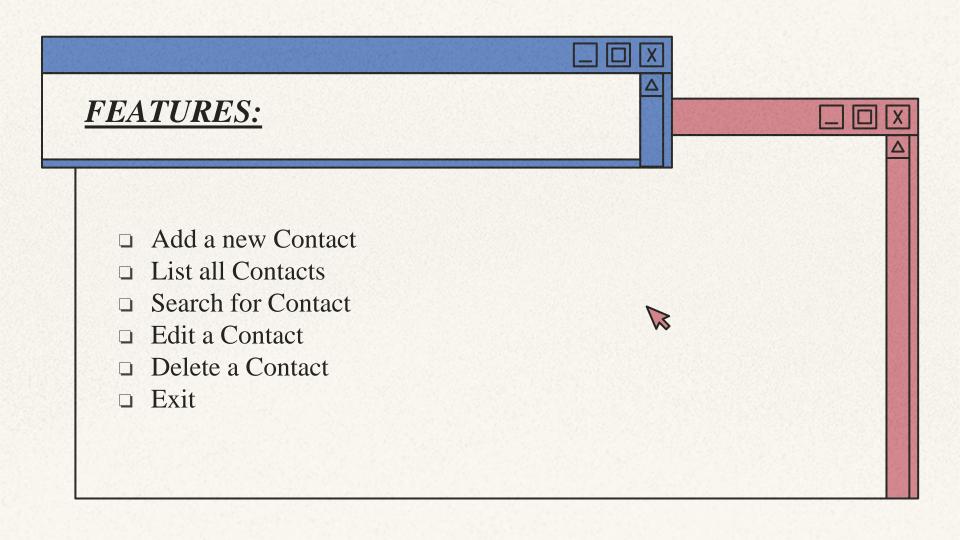
<u>Concepts implemented in the project-</u>

- ❏ Classes and objects
- ❏ Namespace
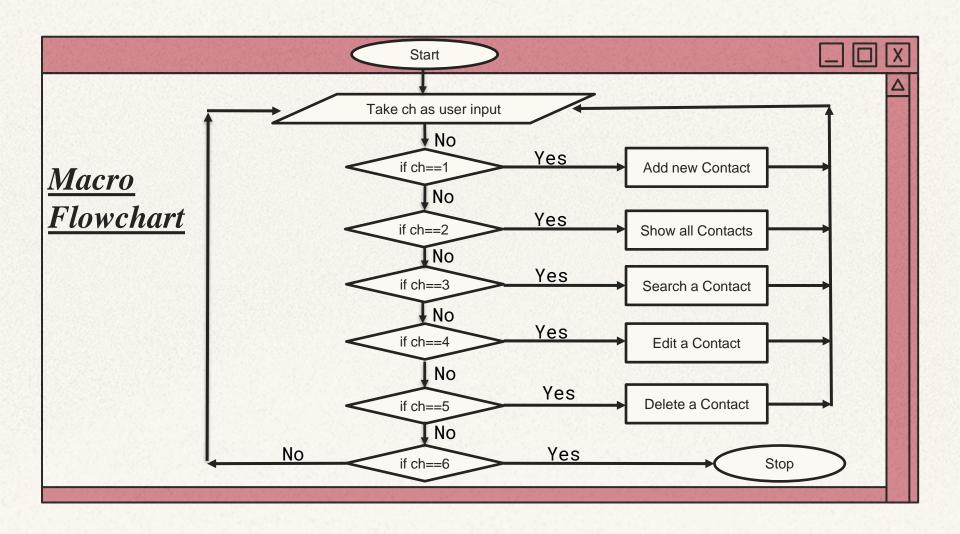- ❏ Header files
- ❏ File handling
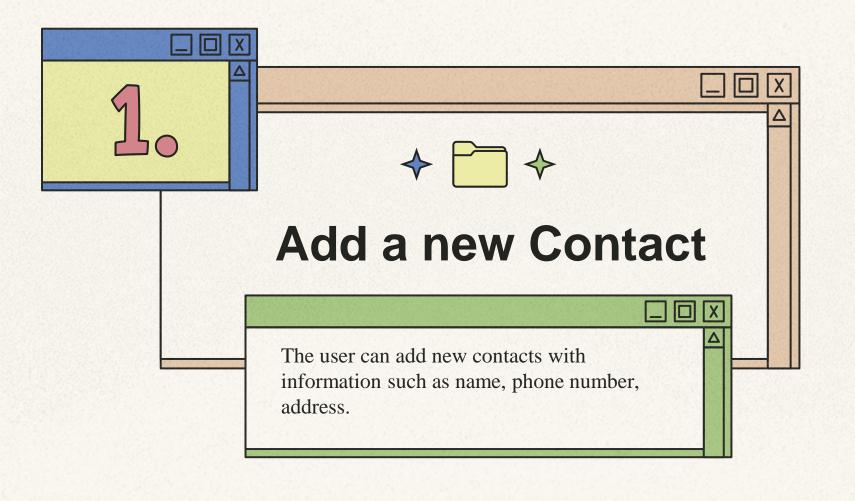
File Handling In C++

- ❏ Files store data permanently in storage device.
- ❏ File handling provides mechanism to store output of a program.
- ❏ C++ provides a set of file handling methods (ifstream, ofstream and fstream).
- ❏ These classes are derived from fstreambase and corresponding iostream class.
- ❏ These classes manages disk files, therefore compulsory to include in program which uses files.

In C++, files are mainly dealt by using three classes fstream, ifstream, ofstream.

❏ **Ofstream:** This Stream class signifies the output file stream and is applied to create files for writing information to files

❏ **Ifstream:** This Stream class signifies the input file stream and is applied for reading information from files

❏ **Fstream:** This Stream class can be used for both read and write from/to files.

FEATURES:

- Add a new Contact
- List all Contacts
- Search for Contact
- Edit a Contact
- Delete a Contact
- Exit

Macro Flowchart

Start

Take ch as user input

No

if ch==1 — Yes → Add new Contact

No

if ch==2 — Yes → Show all Contacts

No

if ch==3 — Yes → Search a Contact

No

if ch==4 — Yes → Edit a Contact

No

if ch==5 — Yes → Delete a Contact

No

if ch==6 — Yes → Stop

No

1.

Add a new Contact

The user can add new contacts with information such as name, phone number, address.

Sample Output:

```
"D:\C++ programs\Mini Project\Contact-Management-System\contactmanagementsys.exe"

                                Add Contacts


Enter Name: Prateek Shah
Enter Mobile no.(along with country code): +918266975896
Enter Address: XYZ Colony, Varanasi
Contact Details added successfully!!

Press Enter key to continue :
```
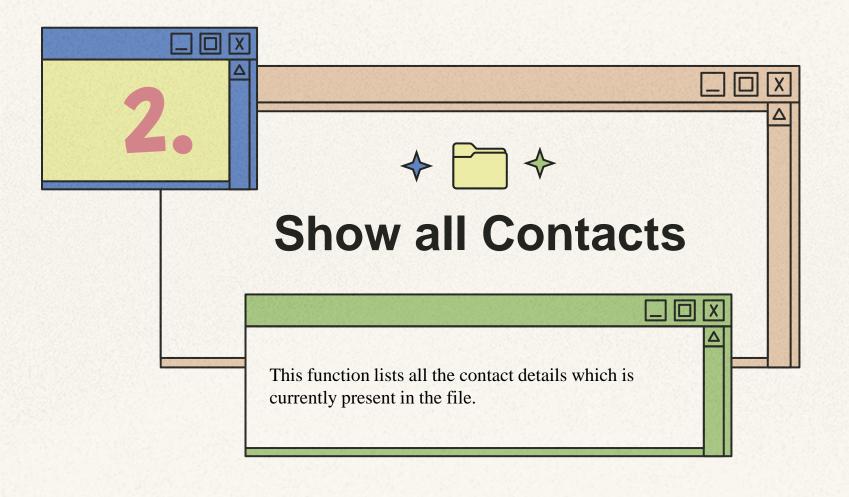
2.

Show all Contacts

This function lists all the contact details which is currently present in the file.

Sample Output:

```
                        Contact Details

Name: arya verma
Mobile: +911234567890
Address: film colony

Name: priyanshi agrawal
Mobile: +916453728945
Address: shivmoti nagar

Name: viplave agrawal
Mobile: +917869980037
Address: hardia compound

Name: prakalp gupta
Mobile: +918109910410
Address: jabalpur

Name: Prateek Shah
Mobile: +918266975896
Address: XYZ Colony, Varanasi


Press Enter key to Continue :
```
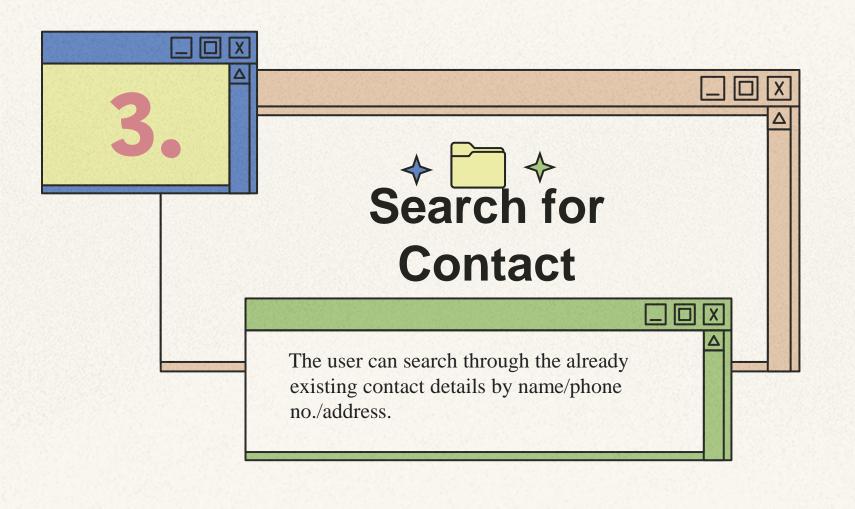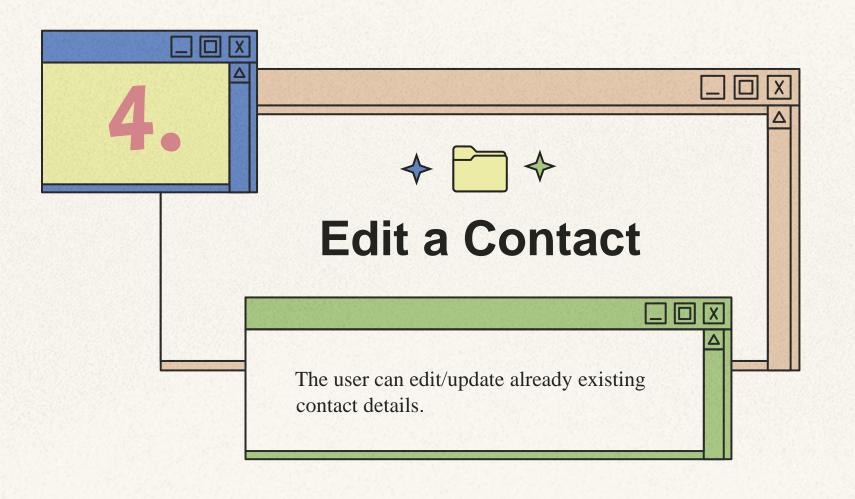
3.

Search for Contact

The user can search through the already existing contact details by name/phone no./address.

"D:\C++ programs\Mini Project\Contact-Management-System\contactmanagementsys.exe"

```
                    Search by Name || Number ||  Address

Enter Name/Number/Address you want to search : Priyanshi

Name: priyanshi agrawal
Mobile: +916453728945
Address: shivmoti nagar


Enter any key to continue :
```

4.

Edit a Contact

The user can edit/update already existing contact details.

Sample Output:

"D:\C++ programs\Mini Project\Contact-Management-System\contactmanagementsys.exe"

```
                              Edit a Contact

Enter contact details to be edited -
Enter Name: Prateek Shah
Enter Mobile no.(along with country code): +918266975896

Enter new contact details -
Enter Name: Prateek
Enter Mobile no.(along with country code): +918266975896
Enter Address : QWERT Colony, Indore
Contact Details Updated successfully!!

Press Enter key to continue :
```

Contacts List after editing:


```
"D:\C++ programs\Mini Project\Contact-Management-System\contactmanagementsys.exe"

                            Contact Details

Name: arya verma
Mobile: +911234567890
Address: film colony

Name: priyanshi agrawal
Mobile: +916453728945
Address: shivmoti nagar

Name: viplave agrawal
Mobile: +917869980037
Address: hardia compound

Name: prakalp gupta
Mobile: +918109910410
Address: jabalpur

Name: Prateek
Mobile: +918266975896
Address: QWERT Colony, Indore


Press Enter key to Continue :
```
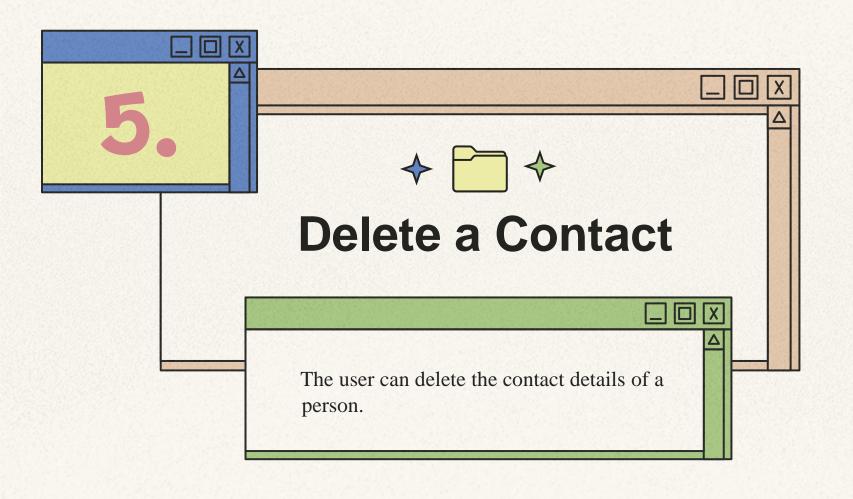
5.

Delete a Contact

The user can delete the contact details of a person.

"D:\C++ programs\Mini Project\Contact-Management-System\contactmanagementsys.exe"

```
                            Delete a Contact


Enter Name: Prateek
Enter Mobile no.(along with country code): +918266975896
Deletion Successful!

Press Enter key to continue :
```

Contacts List after Deletion of a contact:

```
                              Contact Details

Name: arya verma
Mobile: +911234567890
Address: film colony

Name: priyanshi agrawal
Mobile: +916453728945
Address: shivmoti nagar

Name: viplave agrawal
Mobile: +917869980037
Address: hardia compound

Name: prakalp gupta
Mobile: +918109910410
Address: jabalpur


Press Enter key to Continue :
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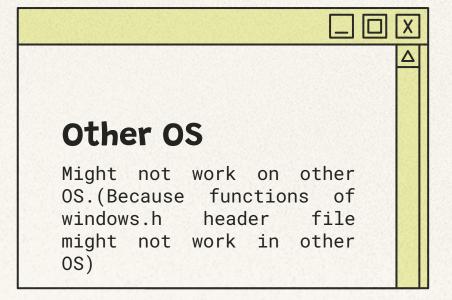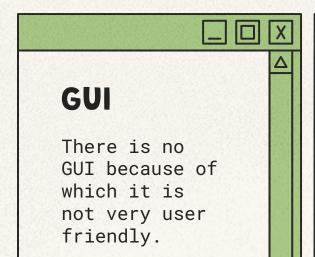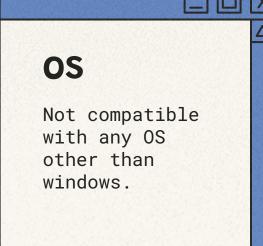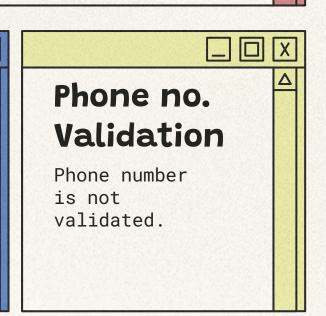
Compatibility

Windows

It is fully compatible with windows OS.

Other OS

Might not work on other OS.(Because functions of windows.h header file might not work in other OS)

Limitations and drawbacks:

GUI

There is no GUI because of which it is not very user friendly.

OS

Not compatible with any OS other than windows.

Phone no. Validation

Phone number is not validated.

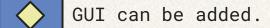# Scope of improvement

◇	GUI can be added.
◇	Phone number validation can be added.
◇	Can be made compatible with more number of OS.
◇	Contact details can be arranged in alphabetical order by names.
◇	We can also use any other kind of DBMS for proper management of data.

Notes

Other that these points there is more scope of improvement in this project.

If you all want to suggest any?

References:

- ❏ www.cppreference.com
- ❏ www.stackoverflow.com
- ❏ www.geeksforgeeks.org

Thank You !!

For source code, you can visit:
https://github.com/Prateek027-S/Contact-Management-System