

i. Motivation: Why did you choose the project?

Creating a phonebook allows us to apply our programming knowledge and skills in a practical way. It provides an opportunity to practice concepts such as data structures, file handling input/output operations, and organizing code. Phonebook have been an essential tool for managing contact information, and creating a digital version using programming can be a practical application of technology. We wanted to make something that can also have a practical usage. We also had the freedom to customize our project like we added a ringtone feature and also a message option along with a block feature. By focusing on user-friendly design, efficient data structures, and well-organized code, we aim to deliver a seamless and efficient contact management experience.

ii. Important Highlights of the project

Our project consists of 2 Major parts – a phonebook and a calculator. The calculator is again has two subparts, normal and vector calculator. The vector calculator doing all the basic vector calculations that usually consume a bit of time to calculate using primitive methods, like calculating the cross product and triple product. As mentioned earlier the phonebook also has a few customizations like adding a relations tag to the contacts, ringtones, block feature and a message option.

ii. What did you learn from this exercise? Concepts that you explored and implemented outside of your comfort zone.

Trying to complete this project we explored the concept of files. How to open and close files, how to create them and saving data into them. We learned about different libraries like conio.h to use different colored texts and backgrounds.

iii. Areas of improvement: What things you could have improved on provided more time/experience?

Had we been given more time, we could have created a better interface for the users to interact with. One which have appeased the users, with a few friendly graphics and user friendly options using sdl graphics. We would have come up with a few more ideas to add to our little project too along with it.

iv. Future Scope: How do you foresee this project being useful in the future?

Traditionally, phonebooks for PCs or computers have not been widely used, as PCs are not typically used for making phone calls. However, with the rise of internet-based communication there is a growing need to centralize phone numbers and contact information on PCs too. By creating a digital phonebook that can be linked to mobile phonebook via the internet, we aim to simplify user's lives and provide a seamless communication experience.

Project Contribution Report

Member 1 - Aditya:

Developed the base code for the calculator application.

Implemented the first five functions: ADD, SUBTRACT, MULTIPLY, DIVIDE, and POWER.

Added background color to the output file.

Implemented the "Add new contact" function in the phonebook.

Assisted in testing and debugging the code for the phonebook application.

Member 2 - Varun:

Developed the base code for the vector calculator.

Implemented the magnitude of vector, add vector, and subtract vector functions in the vector calculator.

Assisted in testing and debugging the vector calculator functions.

Collaborated with other team members to ensure smooth integration of code of vector calculator .

Member 3 - Nikita:

Implemented list and delete functions in the phonebook.

Prepared the basic structure of the phonebook application.

Coded the search and modify functions in the phonebook.

Implemented the message feature in the phonebook application.

Added the ringtone feature and a relation tag to the phonebook.

Added the following functions to the calculator application:

SQUARE ROOT

SINE

COSINE

TANGENT

Assisted in testing and debugging the code for the calculator application.

Member 4 - Arun:

Coded the vector calculator functions, including the box product, dot product, and cross product.

Implemented the search function in the phonebook application.

Assisted in testing and debugging the vector calculator functions.

Collaborated with other team members to ensure smooth integration of code.

Helped in debugging the code for the vector calculator.

Member 5 - Chandra Sekhar:

Assisted in the development of the vector calculator.

Implemented the projection and scalar multiplication functions in the vector calculator.

Collaborated with other team members to ensure smooth integration of code.

Worked on the delete contact function in the phonebook application.