VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi, Karnataka 590018

File Structures laboratory (17ISL68)
Mini Project

*Submitted in partial fulfillment of the requirement
for the award of the degree of*

Bachelor of Engineering
in

Information Science & Engineering
by

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Vidyayāmruthamashnuthe

B.N.M. Institute of Technology

Approved by AICTE, Affiliated to VTU, Accredited as grade A Institution by NAAC.
All UG branches – CSE, ECE, EEE, ISE & Mech.E accredited by NBA for academic years 2018-19 to 2020-21 & valid upto 30.06.2021
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Department of Information Science and Engineering

2019 – 2020

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CERTIFICATE

     Certified that the File Structures Mini Project is carried out by Ms. **HARSHITHA G** USN **1BG17IS016** Ms. **SHARANYA G** USN **1BG17IS039** the bonafide student of **B.N.M Institute of Technology** in partial fulfillment for the award of **Bachelor of Engineering** in **Information Science & Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year 2019-2020.

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Name & Signature of the Examiners with date:

1.

2.

MINI PROJECT

1.1 An overview about the project:

Name of the project is "CURRENT TRENDS". The method used is simple indexing. It consists of two files with the information of currently developing and advanced technologies, like 5G network, block chain, corona, robot dexterity, new wave nuclear power and others.

This project allows the user to add the information into the files, to search about the technology required by the user by using the concept of simple indexing, to modify the content that is the information in the file, to write into the files, and to delete the information from the file from the front end (GUI), which is given an access to access the files in the backend.

2.1 System Requirements:

To be used efficiently, all computer software needs certain hardware components or other Software resources to be present on a computer. These prerequisites are known as system requirements and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: minimum and recommended. With increasing demand for higher processing power and resources in newer versions of software, system requirements tend to increase over time.

2.1.1 Hardware Requirements:

• Processor: Intel® CoreTM i5-6500 CPU @ 3.20GHz

• Installed Memory (RAM): 8.00 GB (7.88 GB usable)

• System type: 64-bit operating system, x64-based processor

• Pen and touch: no pen or touch input is available for this display

2.1.2 Software Requirements:

• Operating systems: Windows

•Web page and design: HTML, CSS

• Connectivity: PHP

• Compatible Browser: Google Chrome

• Text editor: Sublime text

Sublime Text

Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community –built and maintained under free software licenses.

  • Auto-save, which attempts to prevent users from losing their work.

  • Customizable key bindings, a navigational tool which allows users to sassing hotkeys to their choice of option in both the menu and the toolbar

• Find as you type, begins to look for the text being entered as the user types without requiring separate dialog box.

• Spell check function corrects as you type.

• Macros.

• Repeat the last action

• A wide selection of editing commands, including indenting and unindenting.

PHP

PHP stands for HyperText Pre-processor. PHP is a powerful and widely used open source scripting language to write dynamically generated web pages. PHP scripts are executed on the server and the result is sent to the browser as plain HTML.PHP can be integrated with the number of popular databases, including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.

HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript it forms a triad of cornerstone technologies for the World Wide Web. HTML elements are the building blocks of HTML pages.

The definition of HTML is HyperText Markup Language:

• HyperText is the method by which one can move around on the web-by clicking on special text called hyperlink, which brings to the next page. The fact that it is hyper just means it is not linear-i.e., one can go to any place on the Internet whenever they want by clicking on links-there is no set order to do things in.

• Markup is what HTML tags do to the text inside them. They mark it as a certain type of text (italicized text, for example).

• HTML is a Language, as it has code words and syntax like any language.

3.1 File organization in the project:

There are two files in the project, they are file1.txt and file2.txt each file consists of the topics of currently trending technologies and topics with their description.

Each file has an topic id, topic name, and content, some of the operations can be performed on these two files, like adding a topic, searching for the required topic, and deletion of the topic and modification of the topic in the file.

Files are present in xampp in htdocs in FS project folder.

4.1 Methodology to be followed:

Primary indexing:

Indexing is a data structure technique to efficiently retrieve records from the database files based on some attributes on which the indexing has been done.

All indexes are based on the same basic concepts-keys and reference fields. Primary indexing will always be implemented on the sorted (ordered) file.

In primary indexing there are two files, one is index file and the other one is recording file. Index file contains two attributes that is key and a byte-offset field (called as rrn).there is one entry in the index for each record in the data file.

An index is implemented with arrays to hold the keys and record references, each object is declared with maximum number of entries and can be used for unique keys and non unique keys. The methods insert and search do most of the work of indexing. The protected method locates the element key and returns its index. If the key is not in the index then it returns -1.

Whereas the recording file will have actual data record along with address of record. The index returned by the index file is searched in the address of the recording file and the matched index's record will be displayed or read.

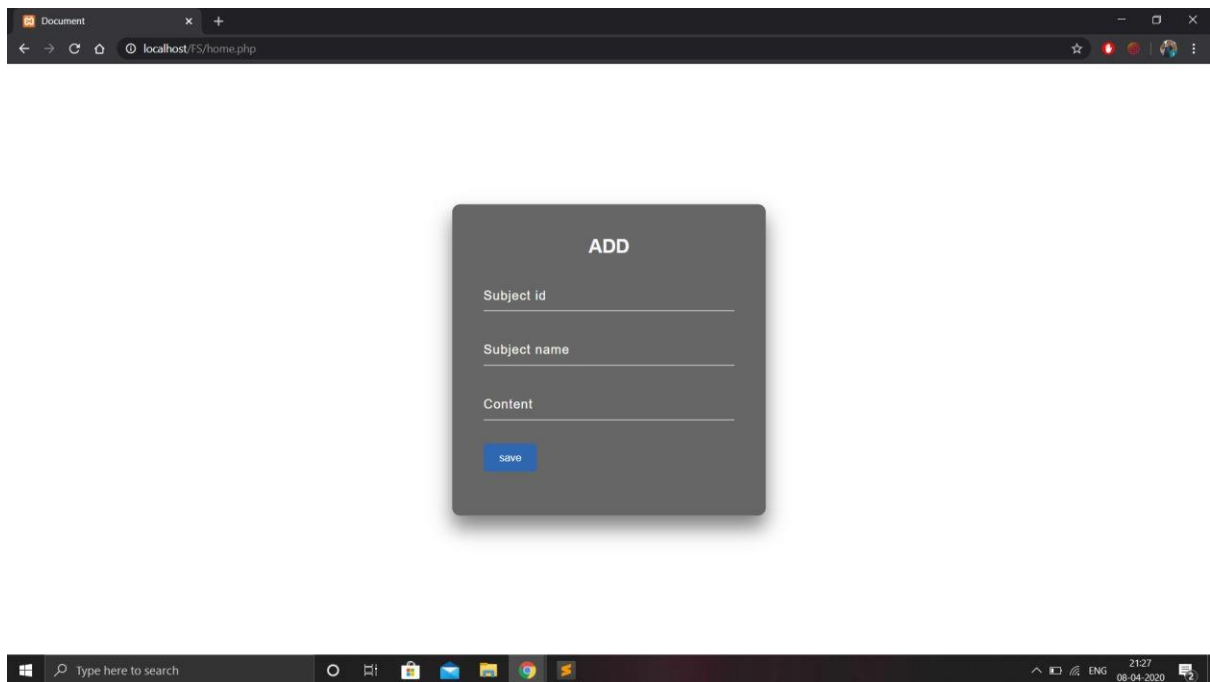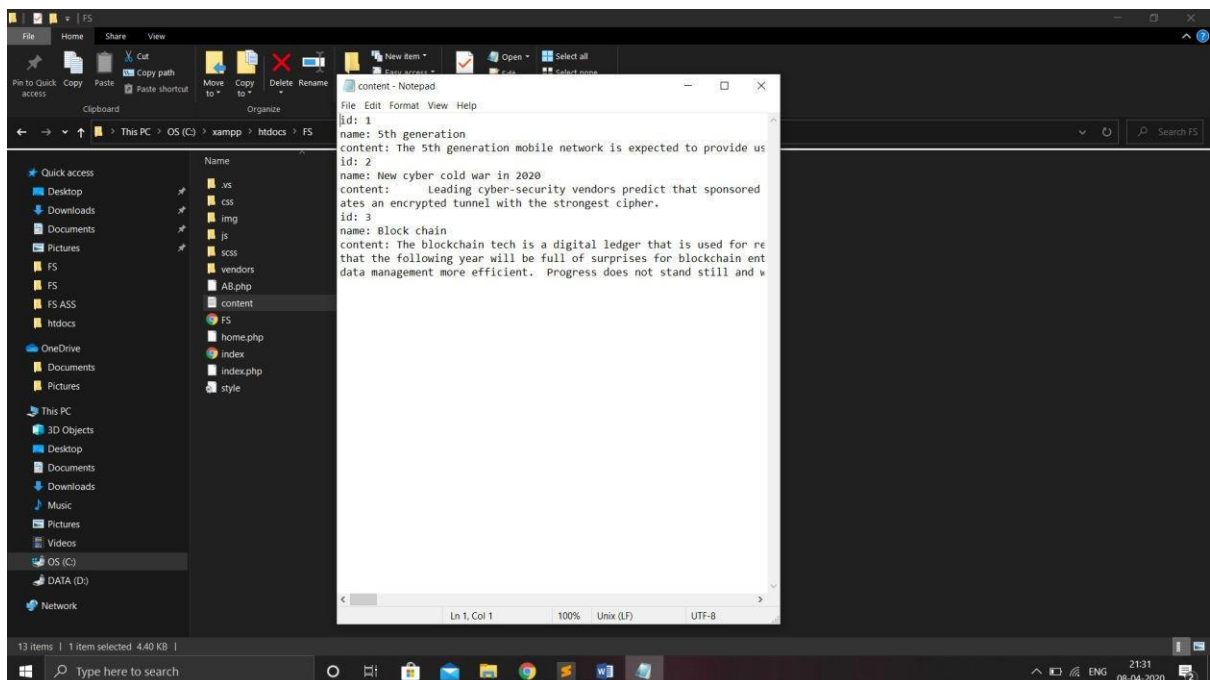## 5.1 Snapshots of Created Text files

Fig1.1: Insert option
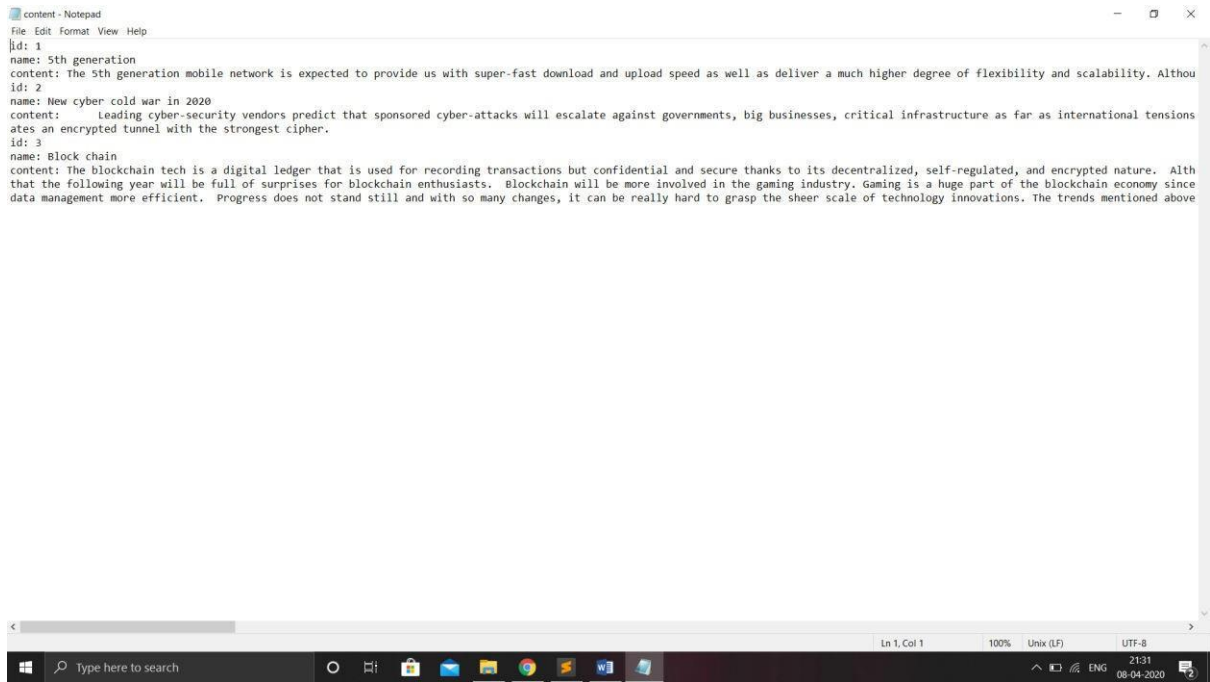

Fig1.2: Already existing contents

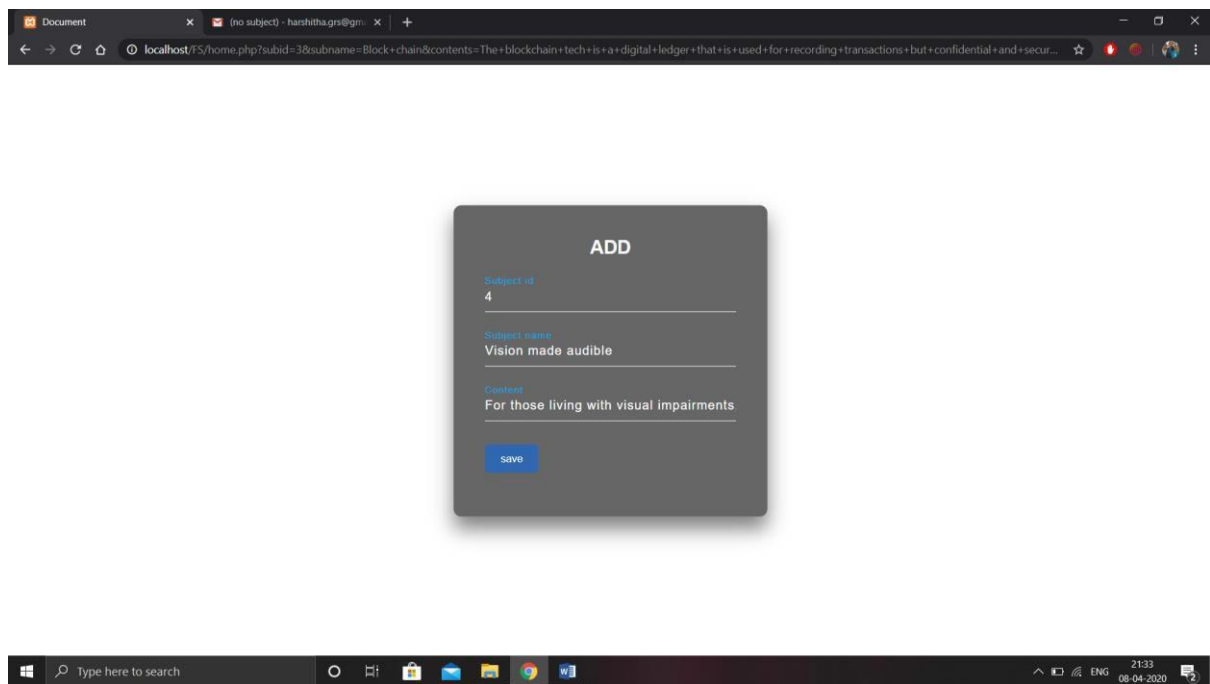**Fig1.3: Content inside text file that already exists.**

Fig1.4: Insertion operation

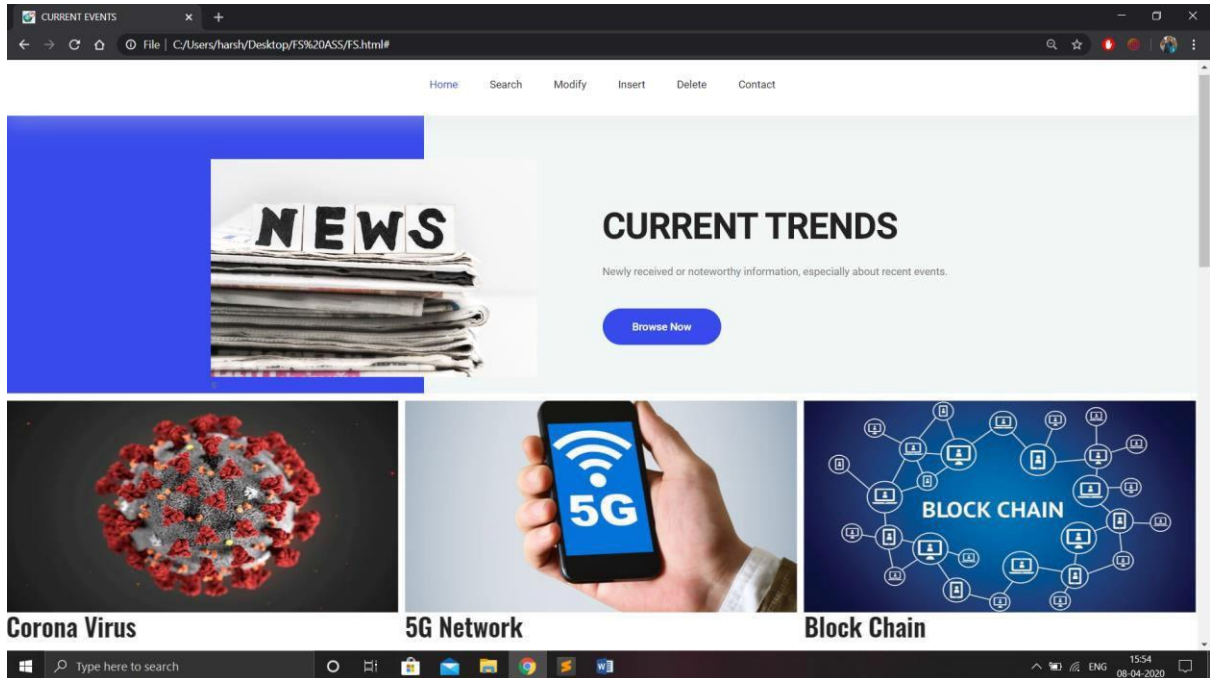## Snapshots of the current GUI:

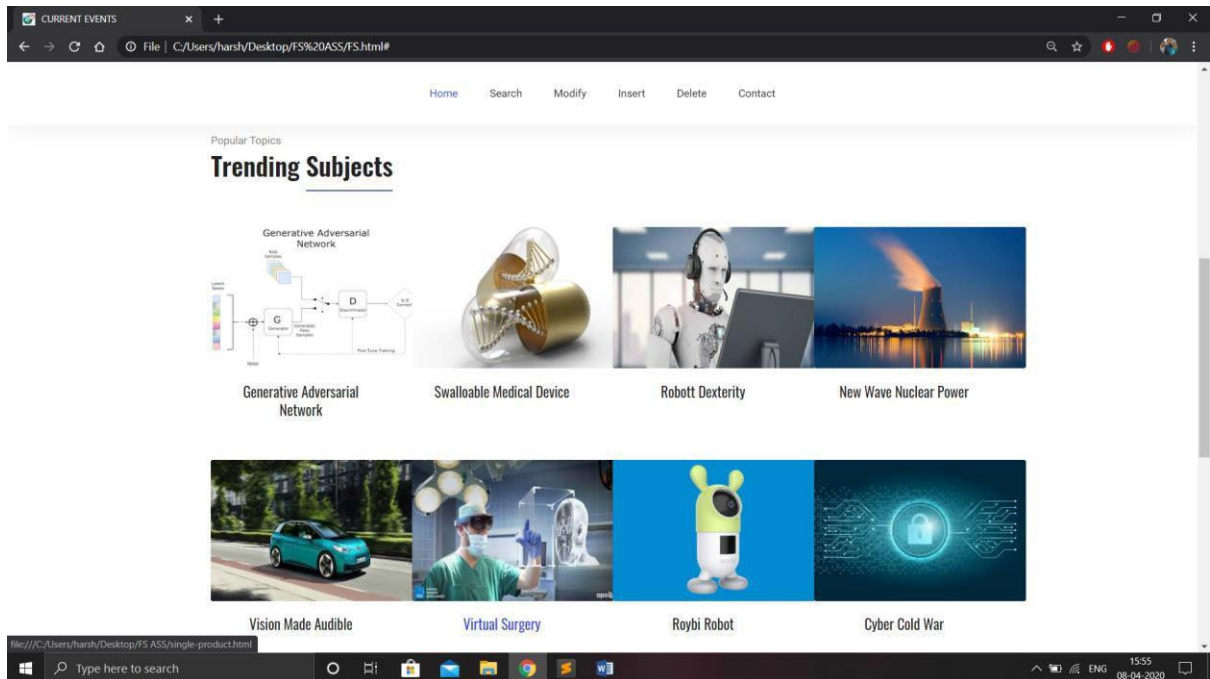**Fig1.5: Home page of the project**

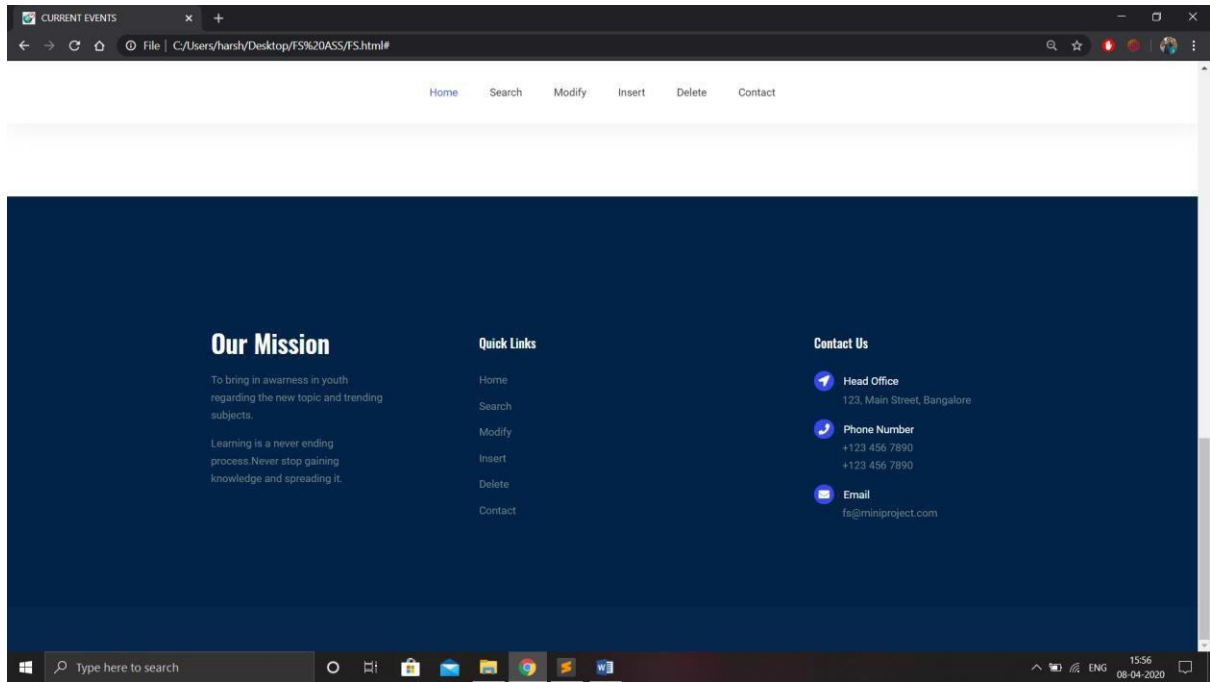**Fig1.6: List of trending topics present in a file**
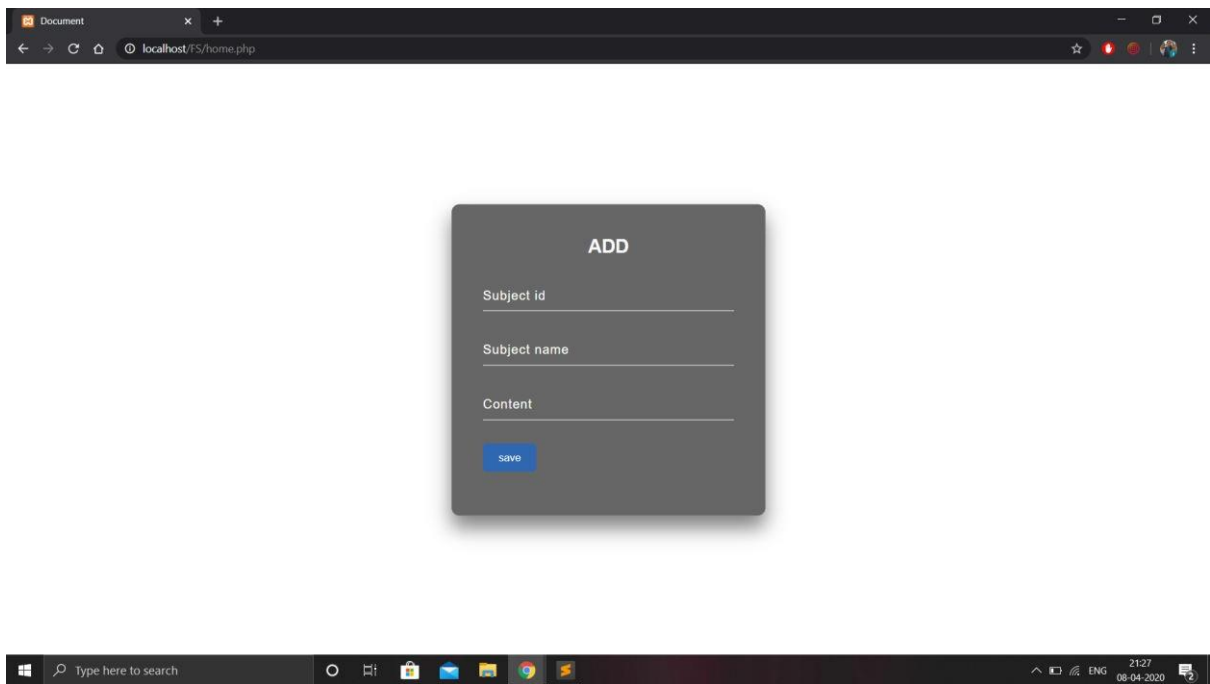
Fig1.7: Contact details for the users in case of any help.

Fig1.8: Insert option to add new records.