LAVERNA

A Project Report submitted partial fulfillment of the requirements for the award of the degree of

Bachelor of Technology

In

Computer science and Engineering

by

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Under the Guidance of
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Declaration

I/we hereby declare that the work which is being presented in the B.Tech. Project **"LAVERNA"**, in partial fulfillment of the requirements for the award of the ***Bachelor of Technology*** in Computer Science and Engineering and submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of my/our own work carried under the supervision of Ms.Gurpreet Kaur who is **Technical Trainer** in GLA University.

The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree.

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Sign __Ayush_____

Name of Candidate: Ayush Kumar Raghav
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Acknowledgement

It is my pleasure to acknowledge the assistance of Ms. Gurpreet kaur without his guidance this project would not have been possible. First and foremost, I would like to express our gratitude to **Ms. Gurpreet Kaur** my project guide, for providing invaluable Encouragement, guidance and assistance. After doing this project I can confidently say that this experience has not only enriched me with technical knowledge but also has unparsed the maturity of thought and vision.

The attributes required being a successful professional.

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ABSTRACT

Note-taking is a vital aspect of our daily lives, as it enables us to capture and organize our thoughts, ideas, and tasks. However, traditional methods of note-taking can be time-consuming and disorganized, leading to reduced productivity and efficiency. The Laverna project was developed as a digital note-taking application that provides a simple and intuitive solution for storing
and organizing notes.

Laverna offers users the ability to create, edit, and categorize notes with ease, as well as providing advanced search functionality and cloud-based storage for easy access from any device. The application also offers automatic backup of notes to prevent data loss and integration with other tools, such as calendar apps or task management tools, for enhanced productivity.

The project's primary objective is to provide users with a user-friendly and efficient note-taking tool that helps them organize their notes effectively. With Laverna, users can streamline their note-taking process, increase productivity and focus on what matters most: their ideas and thoughts. This abstract summarizes the key features and benefits of the Laverna project, demonstrating its potential as a valuable tool for anyone who needs to take notes regularly.

Contents

1. INTRODUCTION

Note-taking is an essential part of our daily lives, whether it be for work, school, or personal use. The ability to capture and organize our thoughts, ideas, and tasks is crucial for maintaining productivity and efficiency. However, traditional methods of note-taking, such as pen and paper or sticky notes , can be cumbersome and disorganized.

To address this challenge, Laverna was developed as a digital note-taking application that offers a simple and intuitive solution for storing and organizing notes. Laverna allows users to create, edit, and categorize notes with ease, providing advanced search functionality and cloud-based storage for easy access from any device. The application also offers automatic backup of notes to prevent data loss and integration with other tools, such as calendar apps or task management tools, for enhanced productivity. The goal of the Laverna project is to provide a user-friendly and efficient note-taking tool that helps users organize their notes effectively. With Laverna, users can streamline their note-taking process and focus on what matters most: their ideas and thoughts.

OVERVIEW

Laverna is a digital note-taking application developed to provide users with a simple and intuitive solution for storing and organizing notes. The application offers users a range of features, including the ability to create, edit, and categorize notes with ease. The application also provides advanced search functionality and cloud-based storage for easy access from any device. One of the primary objectives of the Laverna project is to provide users with a user-friendly and efficient note-taking tool that helps them organize their notes effectively. The application is designed to streamline the note-taking process, increase productivity, and help users focus on what matters most: their ideas and thoughts.

The Laverna project's scope includes defining the functional and non-functional requirements of the application, designing the user interface and architecture, implementing the application, testing the application to ensure its functionality and usability, and deploying the application. The project also includes developing a maintenance and support plan for the application, which includes the process for bug fixes, updates, and feature enhancements.

Overall, the Laverna project aims to provide users with a powerful, yet easy-to-use, note-taking tool that helps them stay organized, productive, and focused on their goals.

OBJECTIVE

The objectives of the Laverna project are focused on delivering a high-quality, user-friendly, and efficient note-taking tool that helps users stay organized, productive, and focused on their goals.

CONTRIBUTION

Providing a user-friendly and efficient note-taking tool that meets the needs of users.

Developing a custom user interface that can be easily tailored to individual user preferences.

Implementing advanced search functionality and cloud-based storage to make it easy for users to access and organize their notes from any device.

Offering automatic backup of notes to prevent data loss and ensure the security and privacy of user data.

Integrating the application with other tools such as calendar apps or task management tools to increase productivity.

ISSUES & CHALLENGES

- Building and Maintaining the Credibility of Online Presence. ...
- Maintaining own Service Standard. ...
- Make Procedure more Convenient. ...
- Dealing with Duplicate Data Entries. ...
- Providing Services as per Specific Requirements.

Organization of the project report:-

1.) Literature Review:

Contains the research works done over the project.

2.)Proposed Work:-

The algorithm and the pseudo code used in the project.

3.)Implementation and Result analysis:-

The implementation of the actual code and analyzing the outcomes of it.

4.)Conclusion:-

Conclusion of the report and preferring a classifier that might give best accuracy.

5.)References:-

The references taken for the completion of the project.

2. LITERATURE REVIEW

Note-taking is an essential aspect of everyday life, and numerous studies have shown that it can enhance learning, memory, and information retention. Over the years, several digital note-taking tools have emerged, and the literature review for the Laverna project will focus on exploring these tools' strengths and weaknesses.

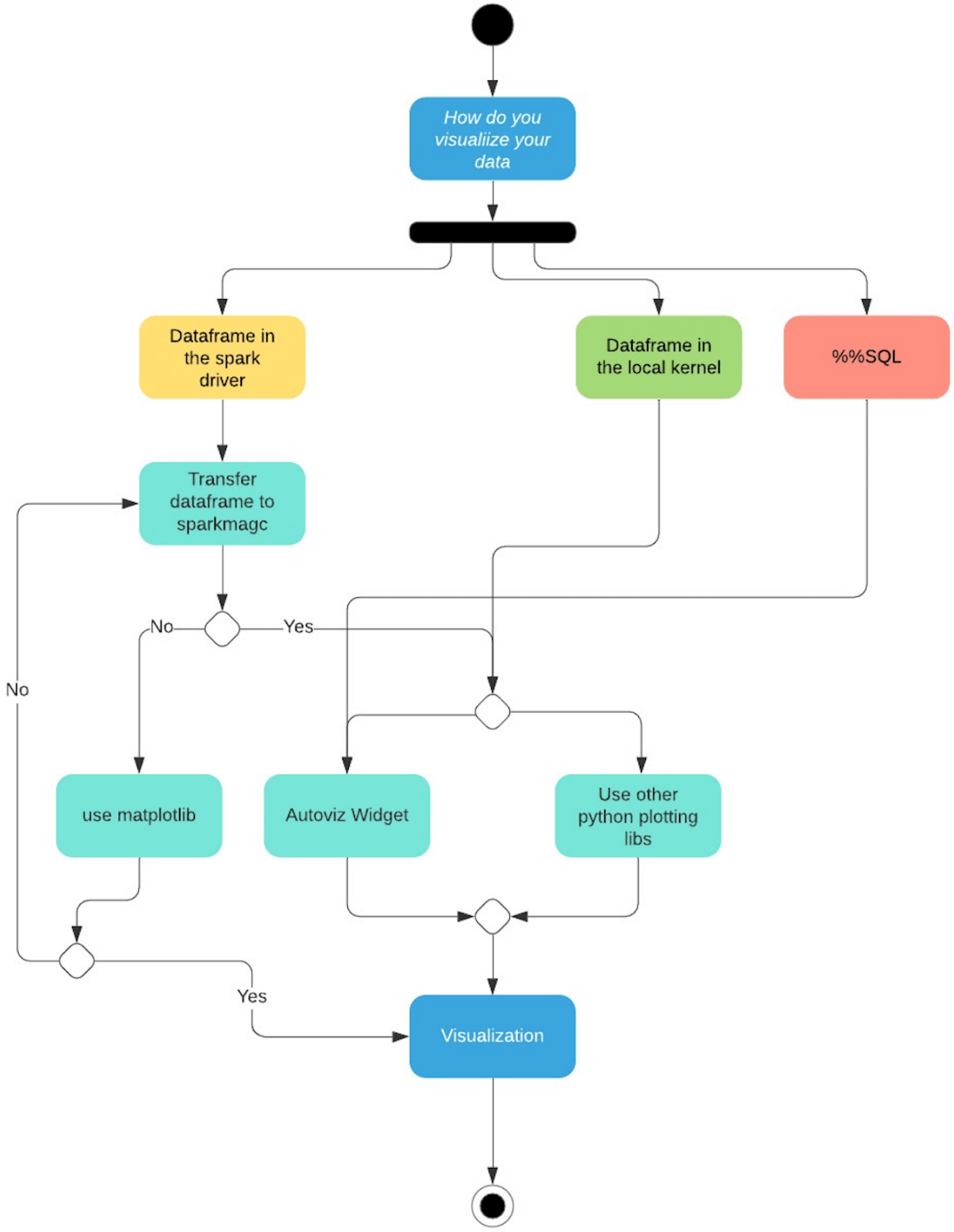
One study by Kirschner et al. (2017) compared digital note-taking tools with traditional pen-and-paper note-taking methods. The study found that while digital note-taking tools offer several advantages, such as faster note-taking, improved organization, and greater accessibility, they can also be a source of distraction and lead to lower comprehension levels than traditional note-taking methods.

Another study by Mueller and Oppenheimer (2014) explored the effects of taking notes by hand versus typing notes on a laptop. The study found that students who took notes by hand had better conceptual understanding, recalled more information, and performed better on tests than those who typed their notes on a laptop.

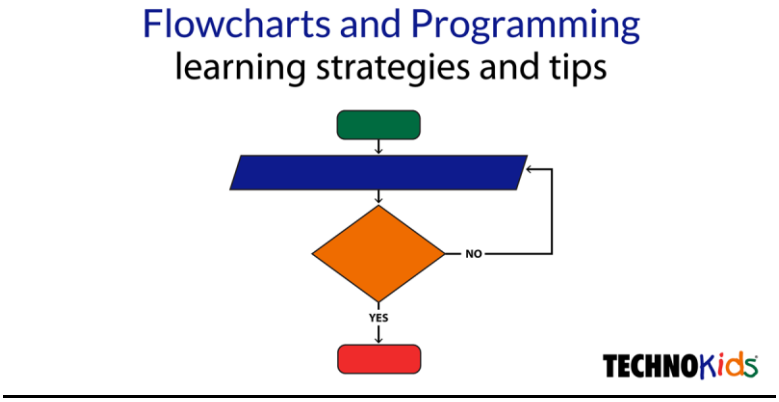
In recent years, digital note-taking tools such as Evernote, OneNote, and Google Keep have gained popularity. These tools offer a range of features, including the ability to create, edit, and organize notes, as well as share notes with others. However, these tools have also been criticized for their complexity and lack of user-friendliness.

Other digital note-taking tools, such as Simplenote and Bear, have emerged as minimalist alternatives to the more complex tools. These tools focus on simplicity and ease of use, offering a streamlined note-taking experience.

PROPOSED FRAME WORK



PROPOSED WORK ALGORITHM:-



User interface design: The first step in the work algorithm is to design the user interface of the Laverna application. This step involves creating wireframes, prototypes, and user interface designs that meet the needs of the users and are intuitive and user-friendly.

Front-end development: After the user interface design is complete, the development process can begin. This step involves coding the user interface of the application using front-end development technologies such as HTML, CSS, and JavaScript.

Back-end development: Once the front-end development is complete, the back-end development process can begin. This step involves coding the server-side logic of the application using back-end development technologies such as JavaScript.

Database management: The next step is to create and manage the database that will store the users' notes. This step involves selecting a database management system (DBMS) such as MySQL or MongoDB and designing the database schema to ensure efficient storage and retrieval of data.

Integration with third-party services: The application can be integrated with other services such as calendar apps or task management tools to increase productivity. This step involves integrating the application with third-party services using APIs and other integration methods.

Testing and debugging: Once the application is developed, it is tested for errors, bugs, and other issues. This step involves testing the application in various environments and scenarios to ensure that it functions as expected.

Overall, the proposed work algorithm for the Laverna project aims to deliver a high-quality, user-friendly, and efficient note-taking tool that helps users stay organized, productive, and focused on their goals.

Steps for applying algo:

1. Consider city 1 as the starting and ending point. Since the route is cyclic, we can consider any point as a starting point.
2. Generate all (n-1)! permutations of cities.
3. Calculate the cost of every permutation and keep track of the minimum cost permutation.
4. Return the permutation with minimum cost.

Fact Finding Techniques:

We mainly used three fact finding techniques to find out for ourselves the correct information on the basis of which we will build the software. These fact finding techniques are extremely important because these are the facts on basis of which we can build the software that comprises of a friendly environment for the members work with. This is the reason why fact finding is an important activity grouped under the second phase "Requirement Analysis" of the Software Development life cycle.

Front-end and Back-end: Front-end:
Java, Bootstrap (Framework) Back-end

Hardware and Software Requirements:

Minimum Hardware Requirements:
Processor: PIII 500MHZ or above
RAM: 128MB RAM Hard Disk: 100MB Free Hard disk space
Monitor: Standard Color Monitor

Minimum Software Requirements:
Operating System: Any Windows Family
Software : Java
Database: Cloud

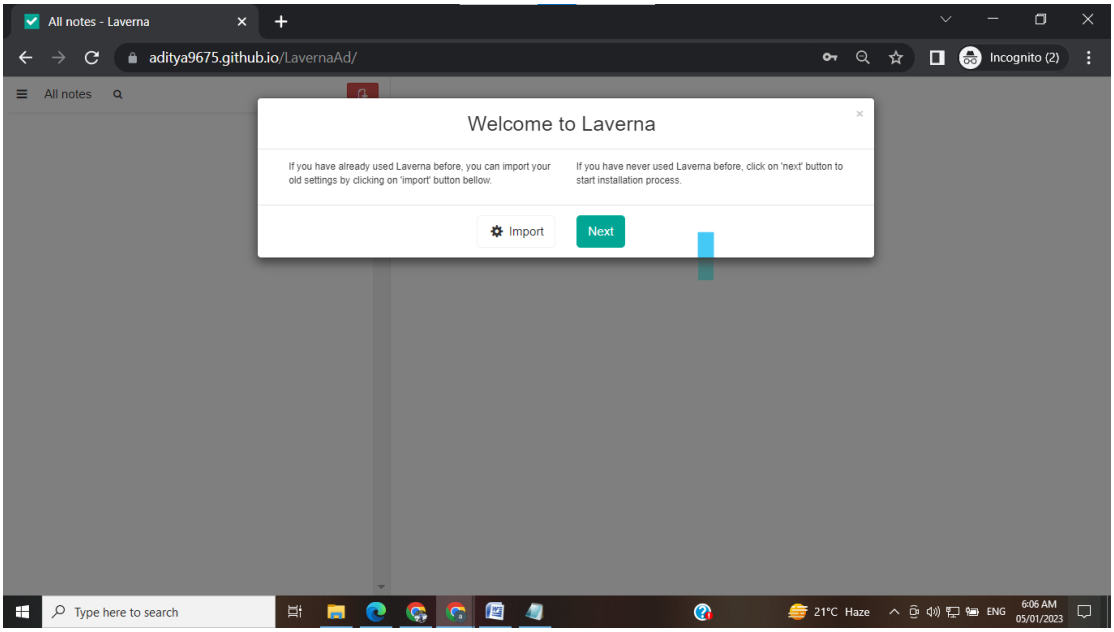
SYSTEM DESIGN & DEVELOPMENT

➢System design is the solution to the creation of a new system. This phase is composed of several systems. This phase focuses on the detailed implementation of the feasible system. It emphasis on translating design specifications to performance specification. System design has two phases of development logical and physical design.

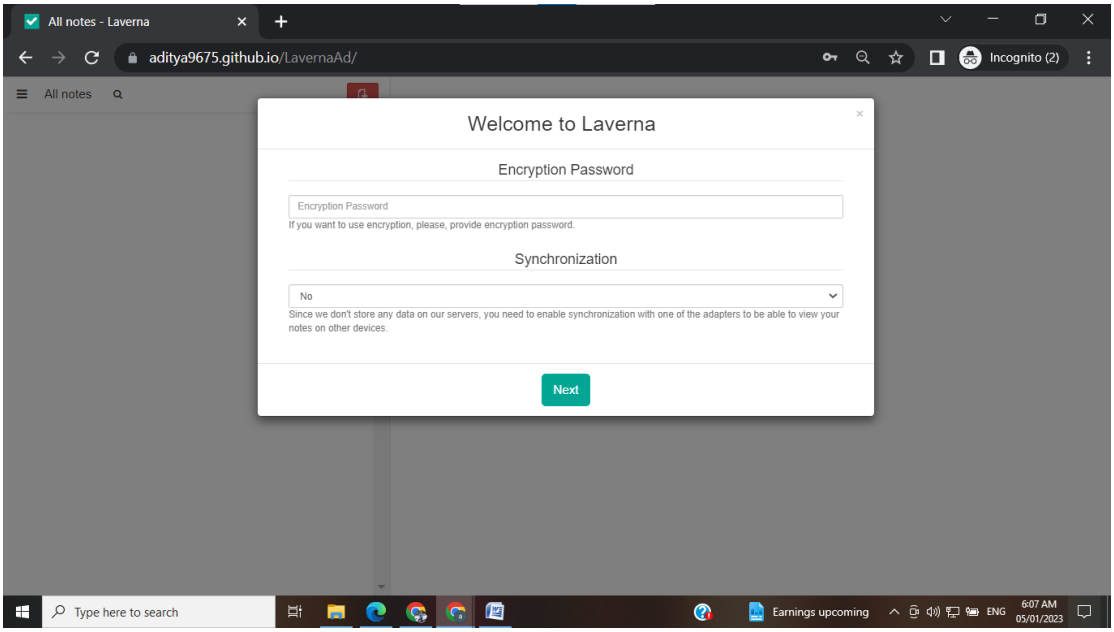
➢ During logical design phase the analyst describes inputs (sources), out puts (destinations), databases (data sores) and procedures (data flows) all in a format that meats the uses requirements. The analyst also specifies the user needs and at a level that virtually determines the information flow into and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design.

➢ The physical design is followed by physical design or coding. Physical design produces the working system by defining the design specifications, which tell the programmers exactly what the candidate system must do. The programmers write the necessary programs that accept input from the user, perform necessary processing on accepted data through call and produce the required report on a hard copy or display it on the screen.

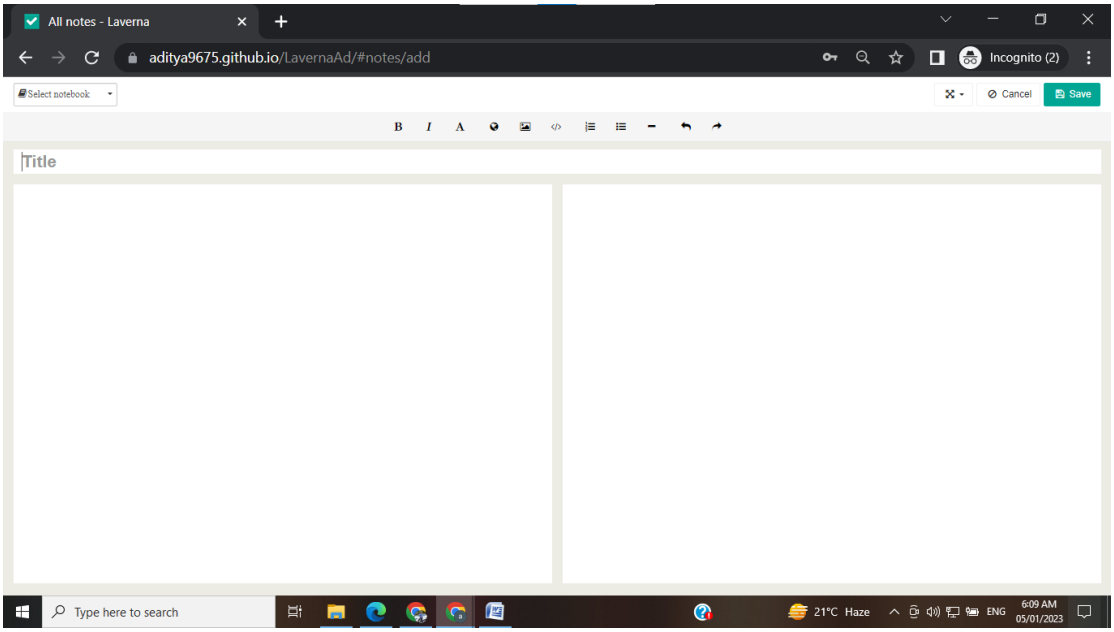
DEMO: When we open the site then first page open will be-



LOGIN SCREEN



Here we have to Write the Notes.



TESTING

Testing is very vital for any system to be successfully implemented. The common view is that it is performed to prove that there are no errors in a program. Therefore the most useful and practical approach is with the explicit intention of finding the errors. The system is tested experimentally to ensure that the software does not fail. The system is run according to its specifications and in the way the user expects. Following testing practices are used. The system will process as normal input preparation of test-sample data.

STRATERGIES FOR TESTING

Unit Testing

Each and every module was intensively tested to check for errors and defects. All possible mistakes were rectified. Manually code is tested like logical errors. Once the manual checking is over the compilation has been done. Syntactical error if any has to be corrected. After the clean compilation of the program, some dummy data as per specifications has been used for testing of that module to see if it works as specified

Integration Testing

Integration testing uncovers errors that arise when modules are integrated to build the overall system. The purpose of integration testing is to detect any inconsistencies between the software units that are integrated together (called assemblages) All the unit tested modules were integrated & the errors that occurred were removed and the overall program structure was build as specified by the design.

System Testing

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. System testing falls within the scope of black box testing, and as such, should require no knowledge of the inner design of the code or logic. System testing is used to detect defects both within the "interassemblages" and also within the system as a whole.

TEST CASES

Test Scenario ID	Test Scenario	Test Case ID	Test Steps	Input	Expected Result	Actual Result	Result
Ts-1	Check url	Tc-1	Go to:https://in.bookmyshow.com	URL:https://in.bookmyshow.com	Homepage is displayed	As expected	Pass
Ts-2	Check Sign in	Tc-2	Click Sign in		Login page will be displayed	As expected	Pass
Ts-3	Check login with valid data	Tc-3	Enter valid mobile number click login	Mobile Number:**********	Homepage will be displayed	As expected	Pass
		Tc-4	Click Forget password		Forget password page will be displayed	As expected	Pass
		Tc-5	Enter invalid mobile number click login	Mobile Number: ..121.644.454	"Please enter the valid mobile number" message willbe displayed	As expected	Pass
		Tc-6	Enter valid Emailid in invalid format	Mail id: gmail.com@xyz	"Invalid format" message should be displayed	It accept the invalid format	Fail
		Tc-7	Enter invalid email id	Mail id: *+@gmail.com	"invalid emailid" message should be displayed	It accept the invalid emailid	Fail
		Tc-8	Enter already registerd number in signup	Mobilenumber: **********	"This mobile number is already registered" message should be displayed	It accept the mobile number	Fail
		Tc-9	Enter invalid otp code	OTP:111111	"We couldn't verify your code.Please tryagain"message will be displayed	As expected	Pass
		Tc-10	Click Terms and Conditions		Terms and Conditions page will be displayed	As expected	Pass

CONCLUSION

It was great opportunity for us as a student to learn and understand various aspects associated with project development. I did undergo from various phases of project development life cycle like analysis , design ,coding , implementation , and testing. The preceding material is a sincere effort from my side to create the "**Laverna**" project . I got the idea about the ups and downs taking place during the project development. I analyzed the problems and solved those problems that were faced in my project. The project shows the flow of each and every transaction which is being carried out by the desired user successfully thus giving him the desired result

REFERENCE WORK

Books:

- Hands-on ML with Scikit-Learn, Keras & TensorFlow -Aurelien Geron
- VB.NET
- SQL 2 - James Groff
- Software Engineering – A Parishioners Approach - Roger S. Pressman

Websites:

- www.google.com
- https://www.w3schools.com/
- https://www.javatpoint.com/