A Project Report On

FlexiFile

Submitted in partial fulfillment of the requirement for the

award of the degree

Bachelor of Computer Application (BCA)

Academic Year 2025 – 26

Vigyat
92300527222

Dhruv
92300527203

Internal Guide
Tirth Bhadeshiya

Rajkot-Morbi Road, At & PO : Gauridad, Rajkot 360 003. Gujarat. India.

Faculty of Computer Applications (FCA)

Certificate

This is to certify that the project work entitled

Flexi File

submitted in partial fulfillment of the requirement for

the award of the degree of

Bachelor of Computer Application

of the

Marwadi University

is a result of the bonafide work carried out by

Vigyat (92300527222)

Dhruv(92300527203)

during the academic year 2025-26

Faculty Guide	HOD	Dean

<u>DECLARATION</u>

We hereby declare that this project work entitled **FlexiFile** is a record done by me.

I also declare that the matter embodied in this project is genuine work done by me and has not been submitted whether to this University or to any other University / Institute for the fulfillment of the requirement of any course of study.

Place :

Date :

Vigyat (92300527222) Signature : _____

Dhruv (92300527203) Signature : _____

<u>ACKNOWLEDGEMENT</u>

It is indeed a great pleasure to express our thanks and gratitude to all those who helped us. No serious and lasting achievement or success one can ever achieve without the help of friendly guidance and co-operation of so many people involved in the work.

We are very thankful to our guide Tirth Bhadeshiya the person who makes us to follow the right steps during our project work. We express our deep sense of gratitude to for his /her guidance, suggestions and expertise at every stage. A part from that his/her valuable and expertise suggestion during documentation of our report indeed help us a lot.

Thanks to our friend and colleague who have been a source of inspiration and motivation that helped to us during our project work.

We are heartily thankful to the Dean of our department **Dr. R. Sridaran** sir and HoD **Dr. Sunil Bajeja** sir for giving us an opportunity to work over this project and for their end-less and great support to all other people who directly or indirectly supported and help us to fulfil our task.

Vigyat (92300527222)   Signature:_____
Dhruv (92300527203)   Signature:_____

CONTENTS

CHAPTER 1: SYNOPSIS

Flexi File Converter is a web-based project designed to help users convert files between multiple formats with ease. Unlike conventional converters, it integrates authentication, secure file handling, history tracking, and administrative controls.

The project is developed using PHP (backend), MySQL (database), Tailwind CSS & JavaScript (frontend), and LibreOffice (conversion engine). It provides conversion for documents, spreadsheets, presentations, text files, and images. The application emphasizes usability, security, and performance, targeting both casual users and organizations needing reliable file management.

CHAPTER 2: PREAMBLE

2.1 General Introduction

File conversion has become an essential requirement in education, business, and research. Users often face compatibility issues when sharing documents in different formats. Flexi File Converter bridges this gap by providing a centralized and secure system to handle diverse formats.

The system offers:

- Support for multiple file types (Word, PDF, Excel, PowerPoint, Images, Text).
- A user-friendly drag-and-drop upload interface.
- Secure login and role-based access.
- History tracking for registered users.
- Administrative tools for monitoring and control.

2.2 Module Description

- File Upload & Conversion → Uploads files, validates type and size, and processes conversion via LibreOffice.
- User Authentication → Registration, login, and secure session management.
- Conversion History → Tracks converted files for each registered user.
- Admin Dashboard → Displays statistics, manages users, and monitors system usage.
- Security Module → Implements input validation, SQL injection prevention, and secure storage.

CHAPTER 3: REVIEW OF LITERATURE

Existing solutions like Zamzar, Online2PDF, and CloudConvert provide online file conversion but often lack:

- Free unlimited usage without restrictions.
- Strong authentication and security.
- A self-hosted model where organizations can control their data.

Flexi File Converter addresses these gaps by offering an open-source-like approach where institutes or individuals can deploy their own conversion system. By integrating LibreOffice in headless mode, it ensures reliability and better compatibility for documents.

CHAPTER 4: TECHNICAL DESCRIPTION

4.1 Hardware Requirement

- Minimum: Intel i3 processor, 4 GB RAM, 20 GB disk space.
- Recommended: Intel i5 or higher, 8 GB RAM, SSD storage.
- Supported Platforms: Windows, Linux, macOS.

4.2 Software Requirement

- Web Server: Apache or Nginx.
- Backend: PHP 7.4 or higher.
- Database: MySQL 5.7 or higher.
- Conversion Tool: LibreOffice (headless mode).
- Browser: Google Chrome, Mozilla Firefox, Edge.

CHAPTER 5: SYSTEM DESIGN AND DEVELOPMENT

5.1 Architectural Design

The application follows an MVC (Model-View-Controller) architecture:

- Model: MySQL database with tables for users, conversion logs, and admin data.
- View: User interface built with Tailwind CSS, HTML, and JavaScript.
- Controller: PHP scripts managing conversion, authentication, and data exchange.

5.2 Class Diagram

(Placeholder: Represents classes like User, FileHandler, Converter, Admin, and Database.)

5.3 Dynamic Modeling

- Use Case Diagram: Shows interactions between users, admins, and the system.
- Sequence Diagram: Displays step-by-step process of file upload → conversion → download.
- Activity Diagram: Demonstrates flow of login, file processing, and history management.

5.4 Database Design

- ER Diagram: Includes entities like User, ConversionHistory, and Admin.
- Menu Design: Navigation bar with "Home, Upload, History, Login, Admin."
- Screen Design: Glassmorphism-based responsive UI with drag-and-drop upload area.

CHAPTER 6: CONCLUSION

Flexi File Converter successfully demonstrates how an academic project can solve a real-world problem. It integrates security, usability, and technical efficiency to provide a reliable solution for everyday users.
While the system currently supports only local file storage and limited formats, it lays a strong foundation for future development with cloud integration, API-based conversion, and advanced security features.

CHAPTER 7: LEARNING DURING PROJECT WORK

During the project, we gained practical skills in:
1. Web Development → PHP & MySQL integration, Tailwind CSS, and responsive design.
2. File Handling → Secure upload mechanisms, file validation, and temporary storage.
3. System Design → Understanding MVC architecture, ER modeling, and diagram creation.
4. Security Implementation → Preventing SQL injection, managing sessions, and secure hashing.
5. Testing & Debugging → Performing functional, security, and performance testing.

CHAPTER 8: BIBLIOGRAPHY

8.1 Online References

- PHP Documentation – https://www.php.net
- MySQL Documentation – https://dev.mysql.com
- LibreOffice Docs – https://www.libreoffice.org
- W3Schools – https://www.w3schools.com

8.2 Offline References

- Classroom lecture notes.
- Standard BCA textbooks on Web Technologies and Software Engineering.