**NOTENCRYPT**

**A PROJECT REPORT**

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

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**CHAPTER 1.**

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# INTRODUCTION

## 1.1.Identification of Client /Need / Relevant Contemporary issue

In today's world, the importance of privacy and data security cannot be overstated. With the increasing amount of information that is being shared and stored online, it is crucial to have tools that can protect sensitive information from prying eyes. One such tool is encryption-based note application software, which allows users to create and store notes in a secure and encrypted environment. These applications use advanced encryption algorithms to ensure that notes can only be accessed by authorized users, making them an ideal choice for individuals and businesses that need to protect their confidential data. In this context, it is important to understand the business and revenue models of encryption-based note application software and the potential client groups who would benefit from using such an application. In this article, we will explore the different revenue models and potential clients for encryption-based note application software, and how it can help users protect their privacy and secure their sensitive information.

The Notencrypt application may be required for the following reasons by a client:

* Individuals who want to keep their notes private and secure, such as students, writers, researchers, and professionals.
* Small business owners who need to store confidential information and want to ensure the security of their notes and ideas.
* Enterprises and organizations that require secure note-taking and collaboration tools for their employees, such as law firms, financial institutions, and government agencies.
* Journalists and activists who need to keep their notes and sources secure.
* Small and medium-sized businesses that handle sensitive information, such as legal and financial firms, healthcare providers, and government agencies.
* Creative professionals: Writers, artists, and musicians who want to keep their creative ideas, concepts, and drafts secure from unauthorized access.
* Businesses and organizations: Businesses and organizations that want to provide their employees with a secure note-taking and collaboration tool for confidential business-related notes, plans, and ideas.
* Non-profit organizations that handle sensitive information and want to protect their data from hackers and cyber-attacks.
* Anyone who values privacy and security and wants to keep their personal and sensitive information safe from hackers and cyber threats.

There are several contemporary issues related to data loss that has been documented in reports by various agencies. Here are some examples:

* A total of **310,855,487 accounts were leaked in 2022** – a third of the 959,327,963 occurrences seen in 2021. Year-over-year breach rates were 67.6% lower in 2022 than in 2021. Moreover, 10 accounts were leaked every second last year, as opposed to 30 accounts in 2021
* According to a report by the Identity Theft Resource Center, there were 1,108 reported data breaches in the United States in 2020, with a total of 300,562,519 records exposed.
* careerizon 2021 Data Breach Investigations Report found that there were 5,258 confirmed data breaches in 2020, with over 36 billion records exposed.
* The Ponemon Institute's 2020 Cost of a Data Breach Report found that the average cost of a data breach was $3.86 million, with the healthcare and financial sectors being the most expensive.
* The European Union Agency for Cybersecurity reported that there were 304,000 cyber incidents in the EU in 2020, with phishing attacks being the most common.
* The Cybersecurity and Infrastructure Security Agency (CISA) reported that there were over 2,400 ransomware attacks on U.S. government agencies, healthcare providers, and educational institutions in 2020.
* These reports highlight the growing threat of data breaches and cyber-attacks and the need for effective tools and strategies to protect sensitive information.

Data encryption software can be useful for a wide range of clients, including:

* Professionals: Lawyers, doctors, and other professionals who handle confidential client information.
* Entrepreneurs: Business owners who need to keep sensitive information such as financial data, customer information, and business plans secure.
* Researchers: Scientists, academics, and other researchers who handle intellectual property, research data, and other confidential information.
* Writers: Authors, journalists, and other writers who need to keep their notes and research secure and confidential.
* Students: Students who need to keep their notes and assignments secure and private.
* Government Agencies: Government agencies that handle sensitive information such as classified information, intelligence reports, and military plans.
* Non-profit Organizations: Non-profit organizations handle donor information, personal data, and other confidential information.
* Individuals: Anyone who wants to keep their personal notes, passwords, and other sensitive information secure and private.
* In short, any individual or organization that needs to store sensitive information can benefit from using encryption-based note application software to keep their data secure and confidential.

### 1.2. Identification of Problem

Today, the amount of information being shared and stored online has increased exponentially. With this increase in information, the risk of data breaches and cyber-attacks has also increased, making it more important than ever to keep sensitive information secure. While there are many note-taking applications available, not all of them offer the level of security and privacy that is needed to protect confidential information. Many of these applications store notes in plain text, making them vulnerable to hacking and data breaches. This puts individuals and businesses at risk of losing sensitive information, which can have severe consequences such as financial loss, reputational damage, and legal liabilities. Thus, there is a need for encryption-based note application software that provides a high level of security and privacy to keep sensitive information safe from prying eyes. Such an application can provide a secure platform for individuals and businesses to store and share confidential information without the fear of data breaches or cyber-attacks.

In today’s digital age, the need for encryption in data has become increasingly important due to the following reasons:

* **Data Security**: The amount of data being generated and transmitted over the internet is massive.
* **Privacy:** With the increasing use of online services and social media, individual privacy has become a major concern.
* **Compliance**: Many organizations are required by law to encrypt certain types of data. For example, the Health Insurance Portability and Accountability Act (HIPAA) requires healthcare organizations to encrypt patient data.
* **Reputation**: If sensitive data is stolen or compromised, it can result in a loss of trust and reputation for an organization.

### 1.3. Identification of Tasks

* Conduct market research to identify user needs and preferences.
* Identify and select an appropriate encryption algorithm to ensure that the notes are securely stored and transmitted.
* Develop a user-friendly interface that allows users to easily create, store, and access notes.
* Implement features such as password protection, biometric authentication, and multi-factor authentication to ensure that only authorized users can access the notes.
* Test the application thoroughly to identify and fix any bugs or security vulnerabilities.
* Develop a marketing strategy to promote the application to potential clients.
* Determine a pricing strategy that is attractive to users while ensuring profitability for the company.
* Develop a revenue model that aligns with the pricing strategy, such as subscription-based or freemium.
* Develop a support system to assist users with any issues or questions they may have.
* Launch the application and continue to monitor and improve its performance based on user feedback and analytics.

### 1.4. Timeline

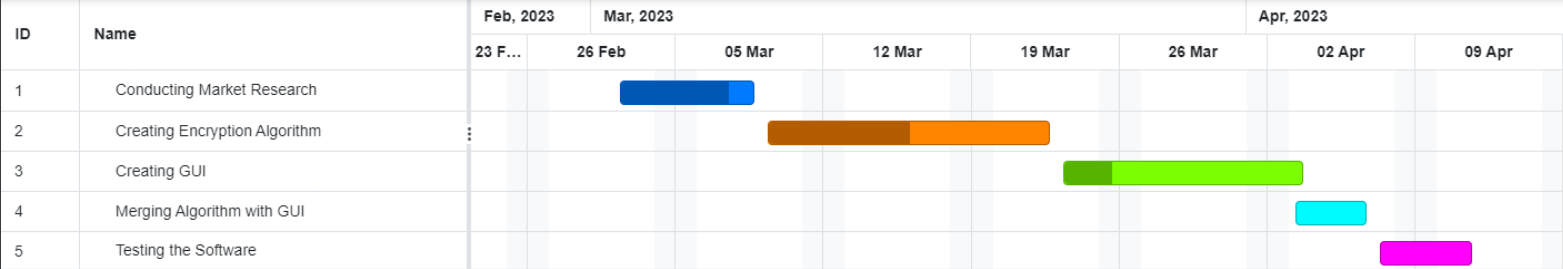
GANTT CHART: NOTENCRYPT

Figure 1.1

### 1.5. Organization of the Report

**Chapter 1 Problem Identification:** This chapter introduces the project and describes the problem statement discussed earlier in the report.

**Chapter 2 Literature Review:** This chapter prevents review for various research papers which helps us to understand the problem in a better way. It also defines what has been done to already solve the problem and what can be further done.

**Chapter 3 Design Flow/ Process:** This chapter presents the need and significance of the proposed work based on a literature review. The proposed objectives and methodology are explained. This presents the relevance of the problem. It also represents a logical and schematic plan to resolve the research problem.

**Chapter 4 Result Analysis and Validation:** This chapter explains various performance parameters used in the implementation. Experimental results are shown in this chapter. It explains the meaning of the results and why they matter.

**Chapter 5 Conclusion and future scope:** This chapter concludes the results and explains the best method to perform this research to get the best results and defines the future scope of study that explains the extent to which the research area will be explored in the work.

# Team Roles

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Member Name | UID |  | Roles | |
| Boby Dubey | 22BIS70029 | • | COLLECTION OF DATA AND RESOURCES | |
|  |  | • | CONDUCTING MARKET RESEARCH |  |
|  |  |  |  |  |
|  |  | • | CREATING THE ENCRYPTION ALGORITHM |  |
| Utkarsh Kumar | 22BIS70054 | • | COLLECTION OF DATA AND RESOURCES | |
|  |  | • | CONDUCTING MARKET RESEARCH | |
|  |  | • | DEVELOPING THE TIME-REMINDER MODULE | |
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|  |  | • | APPLYING ALGORITHMS BACKEND | |
|  |  | • | TESTING THE SOFTWARE | |