# Secure Data Communication System


## Group Members-

**Bibhash Sarkar (18/380)**

**Sanjoy Pator (18/378)**

**Ashish Verma (18/376)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ASSAM ENGINEERING COLLEGE, JALUKBARI**

# SYNOPSIS

In the 21st century sensitive data is increasingly used in communication over the internet. Thus security of data is the biggest concern of internet users. Let us consider a case where the user sends a text or file from his phone to his friend. The risk of the data being accessed by a third party is high when the data enters the cloud platform. Hence a new method to secure the messages/file is to be done either by building a new algorithm or by modifying the existing one which can give more security and consume less time. The identity of the user must also be verified by using the authentication, verification and validation methodologies. Best solution is use of some cryptography algorithm which encrypts data in some cipher and transfers it over the internet and again decrypts to original data. The field of cryptography deals with the procedure for conveying information securely.

The goal is to allow the particular receiver of a message to receive the message properly while disallowing eaves-droppers from understanding the message. Cryptography includes a set of techniques for scrambling or disguising data so that it is available only to someone who can restore the data to its original form. In current computer systems, cryptography provides a strong, economical basis for keeping data classified and for verifying data indignity. Keeping in mind all this problem we are proposing to develop a web app both frontend and backend where an user can send a text / image / doc / audio / video using different algorithms that will be shown to the user according to the file type selected. The receiver has to decrypt the encrypted message in order to have access to the full information.

## **Significance**:

- provides for secure communication in the presence of malicious third-parties
- Ensures the integrity of data using hashing algorithms.

## **Tech Stack:**

- Python, flask