**ENIGMA (Encryptor / Decryptor)**

Computer Science Engineering

Muffakham Jah College of Engineering and Technology

**Abstract:**

With the increase in computer related technologies, there has been a tremendous rise in security breaches and data leaks. Since hiding of data is not a valid option, encryption has come up as the best solution. It plays an important role in information security systems. Many techniques are needed to protect the shared data. Our present work focuses on cryptography to secure the data while transmitting in the network. Firstly, the data which is to be transmitted from the sender to the receiver must be encrypted so that any third person is unable to decipher it. This is usually done using various encryption algorithms in cryptography. Secondly, by using decryption techniques, the receiver can view the original data without any interference in the original text. Enigma machine is an Electro – Mechanical cipher machine used in early to mid - 20th century to protect the military communication between Nazis using encryption.

The applet we are making can be used for encrypting messages. The user will be greeted by an encryption key screen. User can select between the default key or the self-defined key, which asks them to enter character’s encrypted value corresponding to original character itself. After the compilation is successful, any value given as input is encrypted according to the provided key and the result is stored. The reverse process is followed for decrypting the message.