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A PROJECT REPORT ON

DATAGUARD *-THE ULTIMATE PROTECTOR*

(Sponsored by K.S.C.S.T.)

Submitted to Visvesvaraya Technological University in partial fulfillment of the requirement for the award of Bachelor of Engineering degree in Computer Science and Engineering

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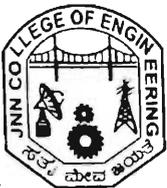
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ABSTRACT

The word security is derived from the Ancient Greek "Se-Cura" and literally translates to "without fear". 'Security' is therefore the state of being secure, or the actions employed to achieve that state.

In this age of universal electronic connectivity, of viruses and hackers, of electronic eavesdropping and electronic fraud, there is indeed no time at which security does not matter. But still many techniques are there to protect the information. The main concept of information security stands on key generation. Harder the key generation sequence difficult for the hackers to hack the information. The main aim of any key generator is to produce the random and unpredictable key sequence. There are various mechanisms to generate the key sequence. The genetic algorithms also can be adopted for the key sequence to create high randomness. The genetic algorithm concept is modeled on a relatively simple interpretation of the evolutionary process. The existing Genetic Algorithms are founded upon three main principles- Selection, Crossover, and Mutation.

Dataguard is an attempt to provide a secure data communication. This uses a symmetric key encryption technique. In this dissertation the concept of genetic techniques like selection, crossover and mutation is adopted for secure communication. The generated keys are subjected for various tests for randomness to obtain fruitful results. The Encryption, Decryption and Message authentication process is carried out with the key sequence. The text files and images are tested and the results obtained are presented with histograms.