## SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore-560057

## Department of Computer Science and Engineering

## Certificate



Certified that the project work entitled "EXPRESSIVE, EFFICIENT AND REVOCABLE DATA CESS CONTROL FOR MULTI AUTHORITY CLOUD STORAGE" carried out by SHARATH MAR (1G11CS074), MANJESH G S (1SG11CS101), NISHCHITH D R (1SG12CS411) bonafide lents of Sapthagiri College of Engineering, in partial fulfillment for the award of Bachelor of Engineering Computer Science and Engineering of Visvesvaraya Technological University, Belgaum during the lemic year 2014-15. It is certified that all corrections/suggestions indicated for internal assessment have been reported in the report deposited in the department library. The project report has been approved as it satisfies academic requirements in respect of Project work prescribed for the said degree.

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## ABSTRACT

Data access control is an effective way to ensure the data security in the cloud. Due to data outsourcing and untrusted cloud servers, the data access control becomes a challenging issue in cloud storage systems. Ciphertext-Policy Attribute based Encryption (CP-ABE) is regarded as one of the most suitable technologies for data access control in cloud storage, because it gives data owners more direct control on access policies. It is difficult to directly apply existing CP-ABE schemes to data access control for cloud storage systems because of the attribute revocation problem. To design an expressive, efficient and revocable data access control scheme for multi-authority cloud storage systems, there exist multiple authorities coexist and each authority is able to issue attributes independently. Specifically, it proposes a revocable multi-authority CP-ABE scheme and apply it as the underlying technique to design the data access control scheme. The attribute revocation method can efficiently achieve both forward security and backward security. The analysis and simulation results show that proposed data access control scheme is secure in the random oracle model and is more efficient than previous works.