Data Management based on IPFS (Blockchain) Paper details: Research Title: Data Management Based on IPFS (Blockchain) Introduction IPFS is a distributed database with peer-to-peer file system and uses content-addressable hash value which is used to verify the data. Using IPFS, one can upload the data in the form of text, images as well as videos. While uploading the data in IPFS, the protocol returns a unique hash value for the data via gateway. This hash value is securely stored in Blockchain. Based on the hash value, the data can be retrieved. In IPFS, data is distributed among the network participants locally. Objectives The proposed scheme combines both IPFS and Blockchain technologies. IPFS is used for storing large volume of data, removes duplication, share files, and hosts them. The aim of the research minimizes the central server storage space, improves data security by using unique content-addressable hashes for data verification and also reduces computing power. Methodology Proposed Scheme 1 Blockchain issues: • Storage on the blockchain is so expensive. • Storing large data and files on the blockchain makes it a dead loss. The blockchain can hardly record a balance transfer for a transaction that includes small strings of the text, then how is it possible to store large files or images on the blockchain? How IPFS Solves? • The storage cost problem on the blockchain can be solved through cryptographic hashes. When hashing a file, for each file (Gupta et al. 2015) and its data, we can get a fixed length string that is unique. IPFS follows a distinct method, by simply storing the hashes on the blockchain rather than storing the files. Proposed Scheme 2 • A user who wants to recover any file can access the abstraction layer and just call the hash of the file. It then goes through nodes and provides the user with the desired file. • A user who wants to upload a word documents to IPFS, puts his document file in his/her working directory. If he/she wants to add this file, IPFS generates a hash for this file. Now his/her file is available on the IPFS network.