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An Approach for Preserving Privacy in Data Mining and its Techniques

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- Data mining aim to extract useful information from huge amount of data, whereas privacy preservation in data mining aims to preserve these data against disclosure or loss.

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- PPDM performs data mining operations in distributed data in a secured manner to preserve sensitive data.
- It is essential to maintain a ratio between privacy protection and knowledge discovery.
- The goal is to hide sensitive item sets so that the adviser cannot extract the modified database.

Objective

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- The main objective of privacy preserving data mining is to develop algorithms for modifying the original data in some way, so that the private data and the private knowledge remain private even after the mining process.

Privacy Preserving Data Mining Techniques

- Anonymization
- Cryptographic Technique
- Data Perturbation
- Randomization
- Generalization
- Bucketization

Challenges in Privacy Preserving Data Mining Techniques

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- Internal and External attacks, Cyber threats
- Fraud in Credit Cards and Individuals Identity Theft
- Flaws in individual techniques

Methodology

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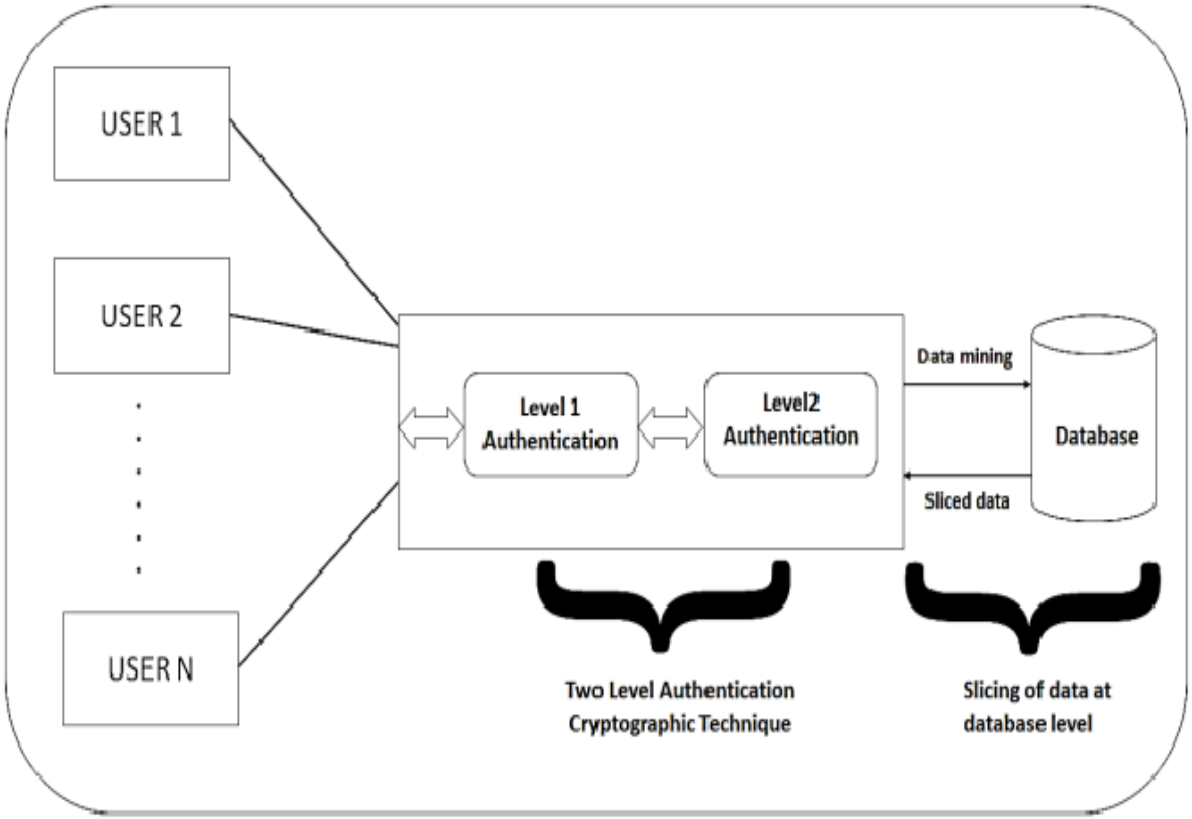

Figure: Method that Overcome the Flaws of PPDM

Uses of Privacy Preserving Data Mining

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- Privacy Preserving Data Publishing
- Changing the results of Data Mining Applications to preserve privacy
- Query Auditing
- Cryptographic Methods for Distributed Privacy

Advantages of Privacy Preserving Data Mining

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- PPDM is very advantageous in development of various data mining techniques.
- It allows sharing of large amount of privacy sensitive data for analysis purposes.
- It has a ability to track and collect large amounts of data with the use of current hardware technology.

Disadvantages of Privacy Preserving Data Mining

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- One of the major problems of privacy preserving data mining is the abundant availability of personal data.

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- To introduced a robust, stable and effective method. Implementation of the algorithm guarantees security to a higher extent. The two level authentication proves to be an impact factor as a fresh approach of key exchange and authentication are used at the same time.

Future Work

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- To reduce the overhead on the two level authentication algorithm.

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Thank You.....