

SCRUTINIZE THE UTILITY OF PRESERVED DATA WITH PRIVACY

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Abstract - A large amount of data which has been handled over a sector in note to that the data which has been collected from the source will be stored in a database. The admin has the authority of approving the manager so that after the approval of admin the manager can access the application. Once the manager gets declined by the admin the can't able to login in that process the manager won't be able to access the application. The details which have been stored can be retrieved later in case of using those details or viewing those information. The admin and the manager is one who can able to view the actions performed by the employees. By handling these data by the admin. The admin can view the data. In case of loss of data or theft of data in a form of attack the manager and the admin can view the details of the employee who has been attacked in the form of tables. The action can be performed here. The details can be attacked by four methods such as a data linkage attack, attribute attack, table linkage attack and probabilistic attack. By these attacks, we can attack the details of an individual by getting their id which has been published. By this action the manager and the admin can view the details of the employee who has been attacked.

1. INTRODUCTION:

A security system identifies and mitigates the system vulnerabilities or restricting access to a very small group. The competition between inventing new security measures to protect data and inventing hacking techniques in conjunction with discovering and leveraging pre existing vulnerabilities is infinite. Therefore, securing data and resources is becoming more and more challenging day by day. Nevertheless, there exist several different techniques to secure the data being transferred over network and also that on a user machine. Specializes in securing data in motion through the use of the patented REL-ID based mutual authentication scheme. It can be used to ensure that the end user is secured as well as the tunnel. It uses techniques of authentication to assure to each end user that it is communicating with an authorized user and not a fake one. Such security measures used to secure data in motion, meaning data that has been shared between computers.

2. SYSTEM ANALYSIS:

After analyzing requirement of the task to be performed, the next step is to analyzing the problem in the module and understand the context. The first activity in the phase is studying existing system and another one is understand the requirement and domain of the new system.

Both the activities equally important in the system, but the first activity serve as a basis of giving the functional specifications. Understanding the properties and requirements of a new system is more difficulties and understanding the existing running system is difficult, improper understanding of the present system can lead diversion from the solution.

2.1. SYSTEM REQUIREMENTS:

2.1.1. HARDWARE REQUIREMENTS:

- RAM 4GB
- Dual-Core 2.8 GHz Processor and Above
- HDD 80 GB Hard Disk Space in the Hardware

2.1.2. SOFTWARE REQUIREMENTS:

- WINDOWS OS (7 /XP and above)
- Visual Studio .Net 2015
- Visual Studio .Net Framework 4.5
- SQL Server 2014

2.2. MODULE DESCRIPTION:

2.2.1. ADMIN MODULE:

The process of admin is to monitor each and every action in an organization and to proceed with the action in Admin. Part of the admin set up is users management which allows users to be set up with definable access level, access to a single or multiple branches. Admin can also set up overall system security settings such as required password strength, inactive session time out, inactive accounts lockout, a password reset period, etc. An important part of security is processed any changes in the system are logged here.

2.2.2. MANAGER MODULE:

The manager module allows users to register, log in, and log out. They benefit from being able to sign on because these associates content they create with their account and allows various permissions to be set for their roles. The manager module support user roles, which set up with fine-grained permissions allowing each role to do only what the administrator permits. Each user is assigned one or more roles. By default, there are three roles in the module: *anonymous* (a user who has not logged in) and *authenticated* (a user who is registered), and *administrator* (a signed-in user who will be assigned site administrator permissions).

2.2.3. EMPLOYEE MODULE:

Gonna replace it with some other data without the knowledge of the employees. And those modified data will be shown only to the manager and the admin. Admin is the one has given the authority to handle those changed data in the database. so retrieving of data can be done only by the admin in this application.

2.2.4. AUTHORIZATION MODULE:

In authorization the admin will be The employee is the actor added by the manager with certain terms. Once the employee has been added those details will be shown to the manager and the admin. they will be having complete information of the employee. The manager can able view only the persons who have been added and they will be given some task to performed by the manager. A complete information about the employees and managers will be shown only to the manager in their database.

2.2.5. THIRD-PARTY MODULE:

The third party is the one who will be getting some details of those employees and they will perform some actions in the local host with the collection of those data. Without the knowledge of employees, they are going to make some changes in the application they are going to theft the data and authorizing the manager in form of approval and decline the manager will be having registration once the manager registered the details will be shown to admin by this the admin will be authorizing the manager. once the admin declines the manager will not be able to login if admin approves the manager can able to login.

2.2.6. PROFILE MODULE:

In profile the manager can able to view the particular applicants who login in the application they can able view the id, designation and some other details. Where the admin can able to view the complete details.

2.2.7.ADD EMPLOYEE MODULE

The Employees module consists of various features allowing you to perform general management tasks such as employee history, perks and incident reports and all the forms and reports necessary to keep track of all your employee data, including age, certificates, personal details.. Any information needed is available at the click of a button with comprehensive reporting features.

3. FUNCTIONAL REQUIREMENTS:

Following is a list of functionalities of the browsing enabled system in the requirements.

- An Activity with a UI that allows you to browser settings. Provide a second Activity that allows users

to access the share with permission from the administrator. Handle activity lifecycle appropriately. A precondition for any points in this part of the grade is code that compiles and runs.

- Your application should allow a user to browse the shares, buy and sell the shares with specific metadata. The assignment requires you to create a UI for browsing and a UI for integrating the two.

3.1. NON-FUNCTIONAL REQUIREMENTS:

- Each member should have a separate system. The system should ask the username and password to open the application in the given requirements. It doesn't permit to unregistered users to access in the System. The system should have the Role based System functions access. Approval Process has to be defined. The system should have the Modular customization components so that they can be reused across the implementation.
- These are the mainly following:
- Secure access of confidential data (employee's details). 24 X 7 availability.
- Better component design to get better performance at peak time in the requirements.

3.2. PERFORMANCE REQUIREMENTS:

Performance is measured in terms of the output in the requirements provided by the application. Requirement specification plays an important role in the analysis of the system. Only when the required specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely in the part of the users of the existing system to give the required specifications because they are the people who finally use the system. It is very difficult to modify the system once it has designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use.

4. SYSTEM DEVELOPEMENT ENVIRONMENT:

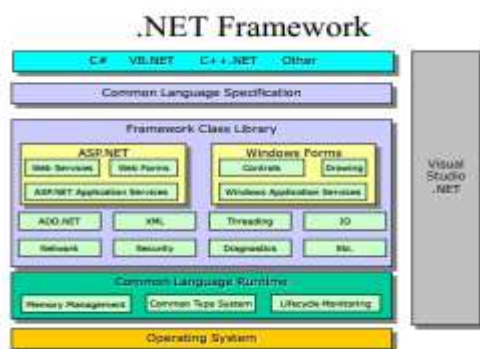
4.1. THE .NET FRAMEWORK ARCHITECTURE:

The .NET Framework is a framework was developed by the Microsoft Company that runs in the Microsoft Windows for pc. It includes a class library called as Framework Class Library (FCL) and provides language interoperability across several programming languages. Programs written for the .NET Framework execute in the software environments, called as the Common Language Runtime (CLR), that application virtual machine that provides service such as securities, memory control managements and exception handlings, FCL and the CLR together constitute .NET Framework.

FCL provides interfaces, data access in the databases, database connectivities, cryptographies, web applications developments, numeric algorithms, and network

communications. Programmers produced the software by combining their own source code with the .NET Framework and other libraries. The .NET Framework is intended to be used by most applications created for the Windows platforms. Microsoft also produced the integrated development environment largely for .NET software called Visual Studio.

The first level is the representation of the operating system; the .NET layer is located between the system and applications. The second level is one of the runtimes such as Common Language Runtime (CLR), which provides the part of the .NET Framework. We discuss the CLR later in this chapter. The next level is one of the libraries such as Base Class Library (BCL), which provides all .NET objects that are used both in your code and by Visual Basic when creating applications. The BCL also provides the infrastructure of several technologies that are used in building applications, such as WPF, Windows Forms, ASP.NET, WCF, and etc. The last level is represented by applications that use the previous layers.



– CLS is one of the agreements among language designers and class library designers about the features and usage conventions that can be relied upon.

- Example: public names should not be in the case for uniqueness.

Since some languages are not case sensitive.

- This does not mean all languages are not case sensitive in the above the CLR.

The Common Type System

- At the core of the Framework is a universal type system called the .NET Common Type System (CTS)?

- Everything is an object - but efficient

- Boxing and Unboxing

- All types fall into two types of categories - Value types and Reference types.

- Value types contain the actual data (cannot be null).

- Stored on the stack databases.

- Three kinds of value types in the stack: Primitives, structures, and enumerations.

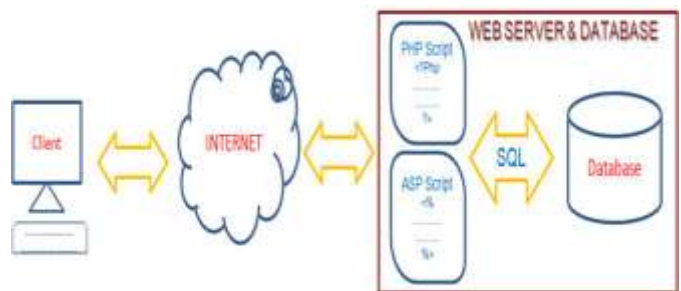
- Compilers map keywords to the primitive types. For Example, the C# “int” is mapped to the System.Int32.

4.2. SQL SERVER 2014:

SQL is a relational database management system (RDBMS) that runs the multi-user access to a number of the databases. It is a popular choice of database for the use in web applications and is an open source product.

The process of setting up a SQL database varies from host to host, however, we will end up with a database name, a user name and a password. Before using our data in the database, we must create a table.

We will then be taken to a setup screen where you must create the fields in the database.



SQL is used to communicate with a database. According to ANSI (American National Standards Institute), it is the standard language for the relational database in the management systems.

SQL statements are used to perform tasks such as update the data in the database, or retrieve data from the database. Some common relational database management systems that use the statements SQL are: Oracle, Sybase, Microsoft SQL Server, Access, Ingres, etc.

5. SYSTEM DESIGN:

Software designs in the software engineering process and technical process and applied for the development paradigm. Design is the first step in the development phase for engineered product and system. The designer’s goal is produce a model or representation of an entity that will later be built. System requirements has specified or analyzed, system design has three technical activities -design, code and test that is required to build and verify software.

Software design serves as a foundation for all software engineering steps that follow. Without strong design we building an unstable system – one that will be

difficult to test, one whose quality cannot be assessed until the last stage.

During design, progressive refinement of the data structure, program structures, and procedural are developed reviewed and documented. System design can be viewed from either technical and project management perspective. From the technical point of view, design is four activities – architectural design, data structure design, interface design and procedural design.

5. 1.NORMALIZATION:

It is a process of converting relation to standard form. The process is used to handle the problems, i.e. repetition of datas in that databases, maintain data integrity as well as handling problems that can arise due to insert, Update, delete anomalies.

Insertion anomaly: Inability to add datas to that databases due to absence of other datas.

Deletion anomaly: Unintended loss of data due to deletion of other datas.

Update anomaly: Data inconsistency resultings from data redundancy and partial updates.

Normal Forms: These are the rule for structuring relation that eliminate anomalies.

5.1.1. FIRST NORMAL FORM:

A relation is said to be in first normal form if the values in that relation are atomic for every attribute in the relation. By this we mean simply no attribute value can be a set of values or, as it is sometimes expressed, a repeating group.

5.1.2. SECOND NORMAL FORM:

A relation is said to be in the second normal form is it is in first normal form and it should satisfy any one of the following rules.

- The primary key is a not a composite primary key
- No, non key attributes are present
- Every non key attribute is fully functionally dependent on a full set of primary key.

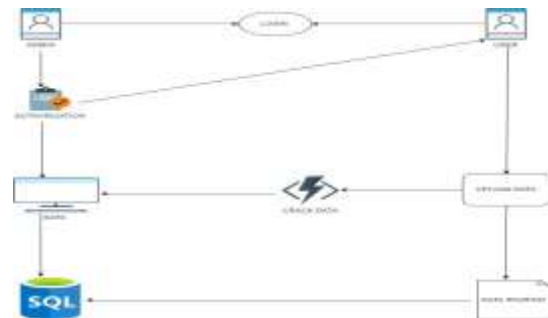
5.1.3. THIRD NORMAL FORM:

A relation is said to be third normal form if their exit no transitive dependencies.

Transitive Dependency: If two non key attributes depends on the each other as well as the primary key, then they are said to be transitively dependent.

The above normalization principles are applied to decompose the data in multiple tables, thereby making the data to be maintained in a consistent stat

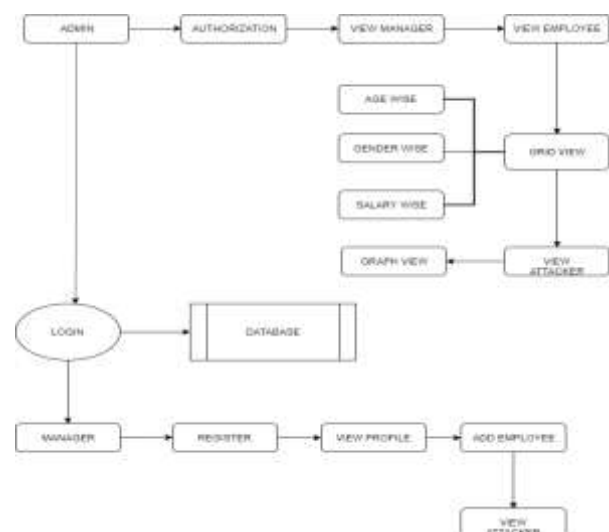
6. SYSTEM ARCHITECTURE:



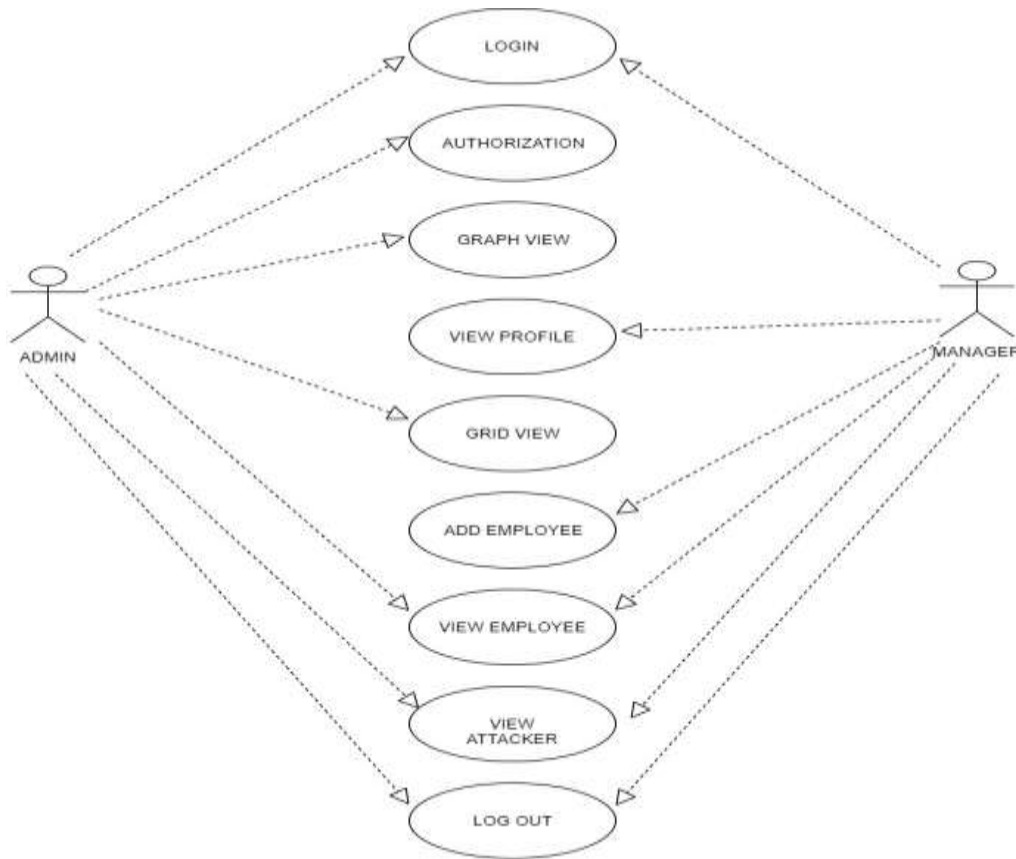
6.1. E - R DIAGRAMS:

- The relations are upon the system is structured through the conceptual Entity Relationship-Diagram, which not only specifics the existing entities, but also the standard relations through which the system exists and the cardinalities are necessary for the system state to continue.
- The Entity Relationship Diagram (ERD) depicts the relationship between data objects. The ERD is the notation that is used conduct, the date modeling activity the attributes of each data object noted, is the ERD can be described resign a data object description.
- The set of primary components are identified by the ERD are
 - Data object
 - Relationships
 - Attributes
 - Various types of indicators.

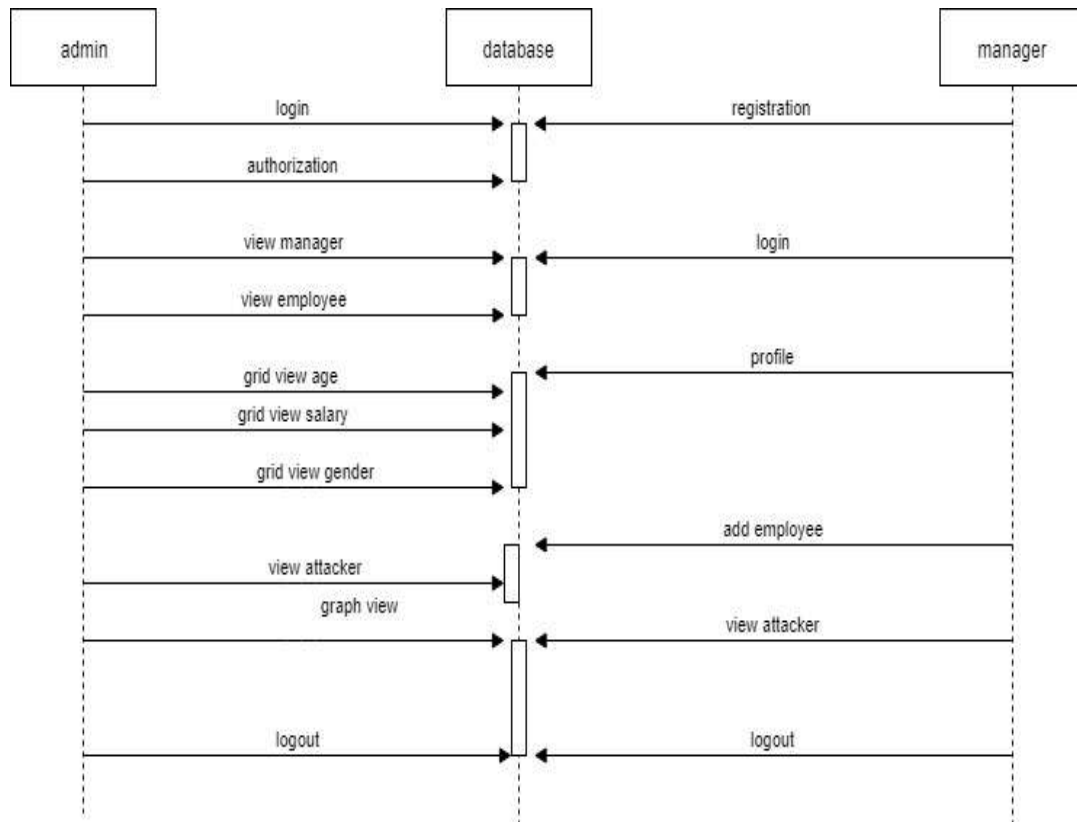
The primary purpose of the ERD is represent data objects and their relationships.



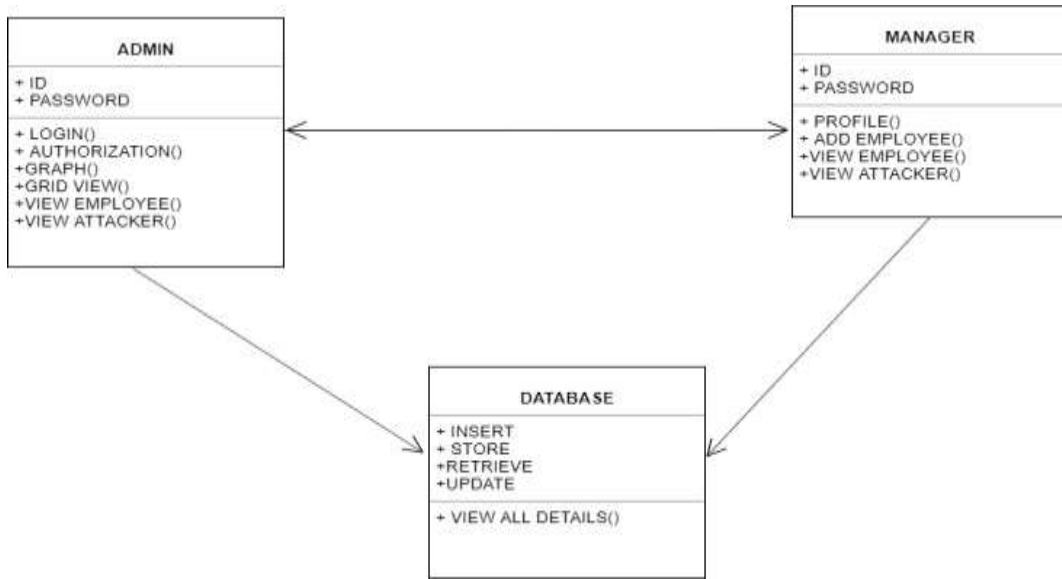
6.2. USE CASE DIAGRAM:



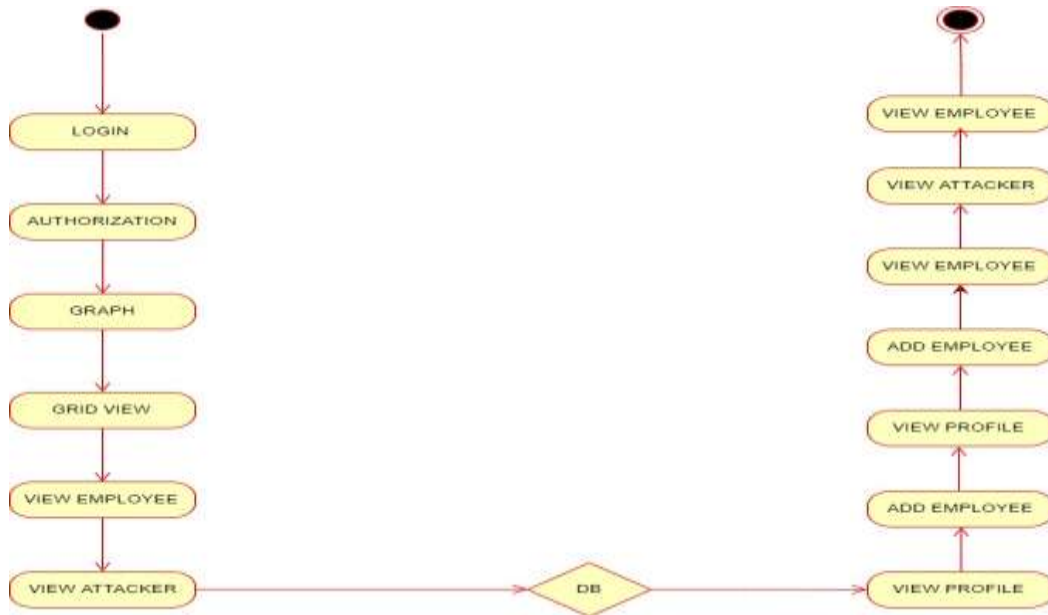
6.3. SEQUENCE DIAGRAM:



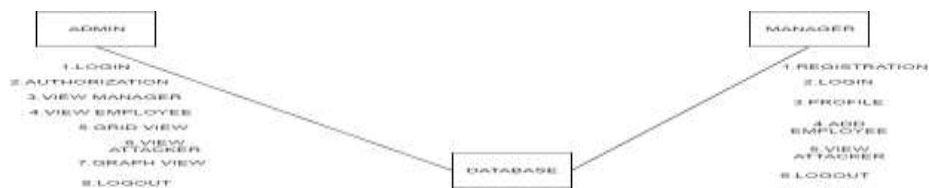
6.4. CLASS DIAGRAM:



6.5. ACTIVITY DIAGRAM



6.6. DEPLOYMENT DIAGRAM:



7. CONCLUSION & FUTURE ENHANCEMENT:

The important goal of this work is to preserve the privacy of the multiple Sensitive data and to improve the utility of published data. It discusses the analyzing approach in brief along with a comparison of its different values. Data analyzing is an efficient approach to the utility of published data with privacy to protect the privacy of published data which modifies the dataset to prevent sensitive information. This yields the means for the prevention of privacy threats like membership, identity and data disclosure. Also, this method can be used to operate for any number of Sensitive information in an efficient manner. In the future, the slicing of secured data with the flow of details is attacked and to reduce the time further through increased processor speed and memory with privacy.

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