**DATABASE DESIGN**

Data; is the general name of all information about the asset. The database is the name given to the storage medium that enables storage and use by organizing some data related to each other.

The database; also means a collection of data. Software is required to create a database and software; It consists of the codes required to perform the transactions.

Forum web sites are communication platforms on the internet, which is the biggest technology in today's conditions.

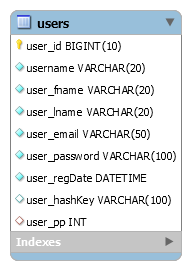
The database created in various ways store all the information required on the StackNShare platform and entered, saved, and used again. The created database; It can be created with software known as database management systems. These are Microsoft Access, MySQL, Oracle, Microsoft SQL Server, Progress and many more.MySql was used when creating the database of this project.

The ER (Entity Relationship) model, which is one of the most frequently used techniques in database design, forms the basis of the relational database approach. The ER model establishes the relationship between the database objects to be created and presents the properties of the objects. There are 3 basic concepts in an ER model.

* **Entities** are structures that represent objects to be created in the database. Generally, these objects can be given as tables in the database.
* **Attributes** are the structures given to each field owned by the ER assets. The components that make up the parts owned by the assets are called. Table columns can be given as an example in the database field.
* Relationship is called structures representing physical and logical connections between entities. In ER diagrams, it defines relationships between entities.

In general, database tables represent entities that are often designed in ER diagrams during the implementation phase. Attributes are columns in each table. However, this is not a rule. Other database objects can also be compared under ER diagrams.

* **Entities,Attributes and Relations that identified for the database of this project are:**



. **USERS:** The information of people who will use the StackNShare forum site is store in this table.

* **user\_id:** To identify each user uniquely
* **username:** The nickname users use to promote themselves when signing up for the forum
* **user\_fname:**Real first name of user
* **user\_lname:**Real surname of user
* **user\_email:** Email that the user registered to the system
* **user\_password:** Password set by the user to use each time he / she enters the system
* **user\_regDate:** The date when the user signed up to the system
* **user\_hashKey:**This is a Firebase Cloud Messaging token. Each of the clients will have unique tokens so that the server can send a message to the client
* **user\_pp**: Position of the user profile photo in the server(Foreign Key)

**PROFILE\_PHOTO:** Users may want to put a profile photo along with their username to introduce themselves in this platform.

* **pp\_id**: It is stored to uniquely identify each user's profile photo**.**
* **pp\_loc:**

**INTERESTS:**It keep information of users interested.

* **inter\_id**: Stored for uniquely identifying the each interests
* **inter\_user\_id:** (Foreign Key) The user id has been stored because each user will have an interest.
* **inter\_sub\_id:** (Foreign Key)Stored for each sub subject of interest.

**DOCUMENTS**: It was created to keep the information of the documents that the users will share**.**

* **doc\_id:** Stored to uniquely identify each shared document**.**
* **doc\_name:** Having a name of the shared documents makes it easy to reach**.**
* **doc\_uploader:** (Foreign Key) It stored to access the information of the user who uploaded the document.
* **doc\_uploadDate:**  Uploaded date of the shared document**.**
* **doc\_subSubject:** (Foreign Key) In which sub subject category the loaded document**.**
* **doc\_supSubject:** (Foreign Key) In which sup subject category the loaded document

**SUP\_SUBJECTS**: We have stored all undergraduate departments that can be shared documents in this table.

* **sup\_id:** To uniquely identify each sup subject
* **sup\_name:** Each sup subject must have a name identifying it

**SUB\_SUBJECTS:** The information stored in this table belongs to the sub subjects that containing the sub-subjects of the sup subjects.

* **sub\_id:** To uniquely identify each sub subject that we stored informations.
* **sub\_name:**Name of sub subject.

**DIRECT\_MESSAGE:** We want users to be able to message directly with each other, so the information of the direct messages is stored in this table.

* **dm\_id:** It identifies each direct message uniquely.
* **dm\_sender:** (Foreign Key) To access the informations of the user who sent the message
* **dm\_receiver:** (Foreign Key) To Access the informations of the user who received the message
* **dm\_date:** Date of direct message

**REPLY:** In the forum section of our site, people can ask questions as well as answer questions.This table keeps the information of the replies.

* **rep\_id:**It identifies each reply uniquely.
* **rep\_replier:** (Foreign Key) To access the informations that which user replied.
* **rep\_topic:** (Foreign Key) To determine that which topic about is replied.
* **rep\_date:** When replied.
* **rep\_likeNo:** How many likes got the reply.

**TOPICS:** Topics that users can discuss in the forum

* **top\_id:** It uniquely identifies each topic.
* **top\_name:**Name of topic
* **top\_creator :** (Foreign Key) The information that which user is created topic.
* **top\_date:** When was the topic created
* **top\_likeNo:** How many likes got the topic.

**TOPICS\_BOOKMARKS:** It stores the information of bookmarks that users put on topics.

* **tb\_id:** To uniquely identify each bookmark placed on the topic.
* **tb\_top\_id:** (Foreign Key) To distinguish that the bookmark is placed which topic.
* **tb\_bookmarker:** (Foreign Key) The user who added the bookmark.

**TOPICS\_LIKES:** It stores the information of the received likes of topics.

* **tl\_id:** It uniquely identifies every like that received.
* **tl\_top\_id:** (Foreign Key) Which topic took like.
* **tl\_liker:** (Foreign Key) User who likes the topic.

**SUB\_SUBJECTS\_BOOKMARKS:** It stores the information of the bookmarks placed in the sub-subjects.

* **ssb\_id:** It uniquely identifies the bookmark placed.
* **ssb\_sub\_id:** (Foreign Key) Which sub subject is bookmarked.
* **ssb\_bookmarker:** (Foreign Key) The user who added the bookmark.

**SUB\_SUBJECTS\_LIKES:**It stores the information that sub-subjects liked .

* **ssl\_id:**It uniquely indentifies every liked that received.
* **ssl\_sub\_id :** (Foreign Key) Which sub subject is liked.
* **ssl\_liker:** (Foreign Key) Which user is liked.

**DOCUMENTS\_BOOKMARKS:** It stores the information of bookmarks placed in documents.

* **db\_id:** It uniquely identifies the bookmark placed.
* **db\_doc\_id:** (Foreign Key) Which document is bookmarked.
* **db\_bookmarker:** (Foreign Key) The user who added the bookmark to document.

**DOCUMENT\_LIKES:** Stores the information of the liked documents.

* **dl\_id:** It uniquely indentifies every liked that received.
* **dl\_doc\_id:** (Foreign Key) Which document is liked.
* **dl\_liker:** (Foreign Key) Which user is liked.

**PROJECTS:**This table stores the information of the shared projects (documents, codes, presentations, etc.).

* **pr\_id:**Uniquely identify each project.
* **pr\_name:** Name of project.
* **pr\_link:** Link to access the project

**PROJECTS\_GROUP:** The table that stores the information of the users in the project group.

* **pg\_pr\_id:** (Foreign Key) Which project.
* **pg\_member:** (Foreign Key) Users that participating in the project.