

Image Database Normalized Tables

LOGIN

Primary Key is Username and it is the foreign key in table: Users

<u>Username</u>	Password
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1NF- Yes

2NF- Yes

3NF- Yes

USERS

Primary Key is Username and it is the foreign key in table: Login

<u>Username</u>	First Name	Last Name	Phone	Email Address
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1NF- Yes

2NF- Yes

3NF- Yes

UPLOAD

Primary Key is composite key and made up of Pic_ID and Username. It is the foreign key in table:

<u>Pic_ID</u>	<u>Username</u>	Date_Uploaded
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1NF- Yes

2NF- Yes

3NF- Yes

DOWNLOAD

Primary Key is composite and made up of Pic_ID and Username. It is the foreign key in table: UPLOAD

<u>Pic_ID</u>	<u>Username</u>	Date Downloaded
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1NF-Yes

2NF-Yes

3NF-Yes

COMMENT

Primary Key is Comment_ID and it is the foreign key in table: Picture/Comment

<u>Comment_ID</u>	Date	Comment String
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1NF-Yes

2NF- Yes

3NF-Yes

USER COMMENT

Primary Key is Username and Comment_ID and foreign key Username in User table and Comment_ID is the foreign key to comment table

<u>Username</u>	<u>Comment_ID</u>
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1NF-Yes

2NF- Yes

3NF-Yes

LIKE

Primary Key is Username and it is the foreign key in table: Users

<u>Username</u>	<u>Pic_ID</u>	Date Created	Date Canceled
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1NF-Yes

2NF-Yes

3NF- Yes

PICTURE

Primary Key is Pic_ID and it is the foreign key in table: Upload

<u>Pic_ID</u>	Size	Date Uploaded	Download count
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1NF- Yes

2NF- Yes

3NF- Yes

PICTURE LOCATION

Primary Key is Pic_ID and it is the foreign key in table: Picture

<u>Pic_ID</u>	Location_ID
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1NF-Yes

2NF-Yes

3NF-Yes

PICTURE COMMENT

Primary Key is Pic_ID and it is the foreign key in table: Picture

<u>Pic_ID</u>	<u>CommentID</u>
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1NF-YES

2NF-YES

3NF-YES

CATEGORY

Primary Key is Pic_ID and it is the foreign key in table: Picture

<u>Pic_ID</u>	Category
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1NF- Yes

2NF- Yes

3NF- Yes

TAG

Primary Key is Tag_Name and it is the foreign key in table: Tag

<u>Tag_Name</u>	<u>Pic_ID</u>
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1NF- Yes

2NF- Yes

3NF- Yes

LOCATION

Primary Key is Location_ID and it the foreign key in table: Picture

<u>Location_ID</u>	Location_Name	Country	State	City
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1NF- Yes

2NF- Yes

3NF- No because you can generate some of these columns based of the others.

However, we argue that for the sake of simplicity, this table is ideal because its easier to interact with the data, as opposed to splitting into 4 separate tables. It is developers choice to keep this table in 2NF. If the project becomes larger and memory becomes more of an issue we may decide to change this table to 3NF.

Entity Set Description:

USER: The set of all people that use our website, and interact with it. The USER entity is described by attributes Username, First name, Last name, phone, and email. The attributes Username, First Name, and Last Name will be allowed 20 characters each. Phone Number accepted value will be 7 or 10 integers. Email will be allowed 40 characters.

PICTURE: The set of all pictures on our website. The PICTURE entity is described by attributes Pic_ID, Date Uploaded, Size, and Download Count. Pic_ID will be issued according to an algorithm that assigns Pic_ID's in sequential order of when they are uploaded with identifiers to the User that uploads them. The size will not exceed 1080px by 1080px.

LOCATION: The set of all locations that are associated with pictures. The LOCATION entity is described by attributes Location_ID, Location_Name, Country, State, and City. Location_ID will be allowed 25 characters including integers. Location_Name, Country, State, and City will be have allowed values of 1 to 25 characters, and no special characters or integers.

CATEGORY: The set of all categories that a Picture can be associated with. The Category is described by attributes Pic_ID and category. The category attribute is allowed to have up to 25 characters.

TAG: The set of all tags that can be associated with a picture. The Tag can be described by a Tag and Pic_ID. The Tag is allowed to have a domain of 1 to 25 characters, and no special characters or integers.

LOG-IN: The set of all Usernames and Passwords. Usernames are allowed to have 1-25 characters with integers and special characters allowed. Passwords must have a domain of 6-25 characters, and integers and special characters are included.

COMMENT: The set of all comments made by users. The set is described by attributes Comment_ID, Date, and Comment String. The Comment_Id and Date will be issued by an algorithm, and the Comment String will have a maximum allowable characters of 400 and special characters and integers are allowed.