

## Database ER Diagram of HERMES Listing application.

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Our database is going to consist of 10 tables.

Firstly there is going to be the User\_Data table which is holding every information needed about our users.

Columns of **User\_Data** table are:

- userID int PK: a unique number which servers as an ID.
- username varchar: The username of the user.
- password varchar: The password of the user.
- name varchar: The real name of the user.
- surname varchar: The surname of the user.
- address varchar: The user's address.
- email varchar: The user's email address, going to be used as the primary communication method.
- telephone int: The user's telephone which can be null if the user doesn't want to be known. This is going to help for validation reasons (if a listing is made by a real user or a fake profile).

Listings table is holding info about the listings.

Columns of the **Listing** table are:

- listingID int PK: a unique number identifying the listing.
- listingName varchar: The name of the listing user set during the creation of the listing.
- listingDescription longtext: The listing description user set during the creation of the listing.
- listingPicture blob: The collection of pictures of the listing.
- activeListing Boolean: Active listing field identify if a listing is still active or was set inactive (complete) by the owner of the listing. No listings are getting deleted and they are publicly available every time in a different section.
- listingRegion FK id: A unique id which is correspond to listing's region (ex: Thessaloniki, Athens, etc).
- listViews int: Number of list's views.
- subCategoryListing int FK: An id which corresponds to a sub category letting us know what is this listing for (example of a subCategoryListing is bmw where the greater category is car).

Then we have minor tables like:

**User\_Tracking** tracking which holds users activity data.

Columns of **User\_Tracking** table are:

- userID FK to userID of thable User\_Data.

- lastLogin Date: Holds the last time the user logged in.
- lastPasswordChange Date: Holds the last time the user changed his password in order to force them to change it every x times for security reasons.

**View\_history** table holds which user has viewed which listing for recommendation purposes.

- listinID FK to listingID of table **Listings**.
- userID FK to userID of table **User\_data**.

**User\_Favorite** table holds user's favourites listing so he can come back later and find them more easily.

- listinID FK to listingID of table **Listings**.
- userID FK to userID of table **User\_data**.

**Owners\_Listings** table holds user's listings.

- listinID FK to listingID of table **Listings**.
- userID FK to userID of table **User\_data**.

**User\_Preferences** table holds user's preferences about the app.

- userID FK to userID of table **User\_Data**.
- emailNotifications Boolean: If user has opted for email notifications.
- #more fields can be added here during the development of the app.

**Location\_List** table holds a pre-set locations of areas where listings can be from.

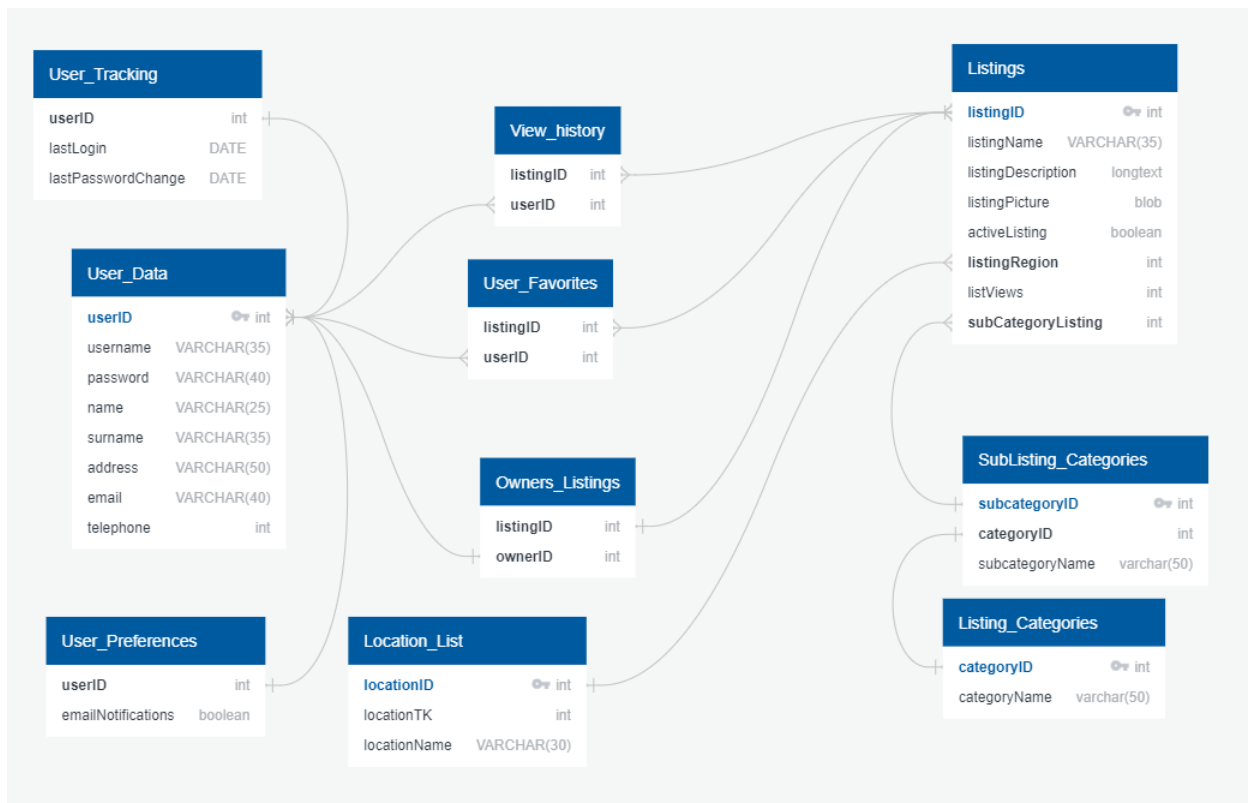
- locationID int PK: A unique id for the location.
- locationPC int: The postcode of the location.
- locationName VARCHAR: The location's name.

**Listing\_Categories** table holds the information about the listing's categories (example: Home, car, electronics ect).

- categoryID int PK: A unique id for the categories.
- categoryName varchar(50): The name of the category.

**SubListing\_Categories** table has data about about the sub categories of the greatest for easier search purposes and better categorization.

- subCategoryID int PK: The sub category ID.
- categoryID int FK on **Listing\_Categories**: The main category ID.
- subcateogryName VARCHAR: The sub category name.



ER diagram

The ER diagram is subject to change as the app keeps evolving more and more especially during the early stages of development. Changes also can be made for boosting performance.

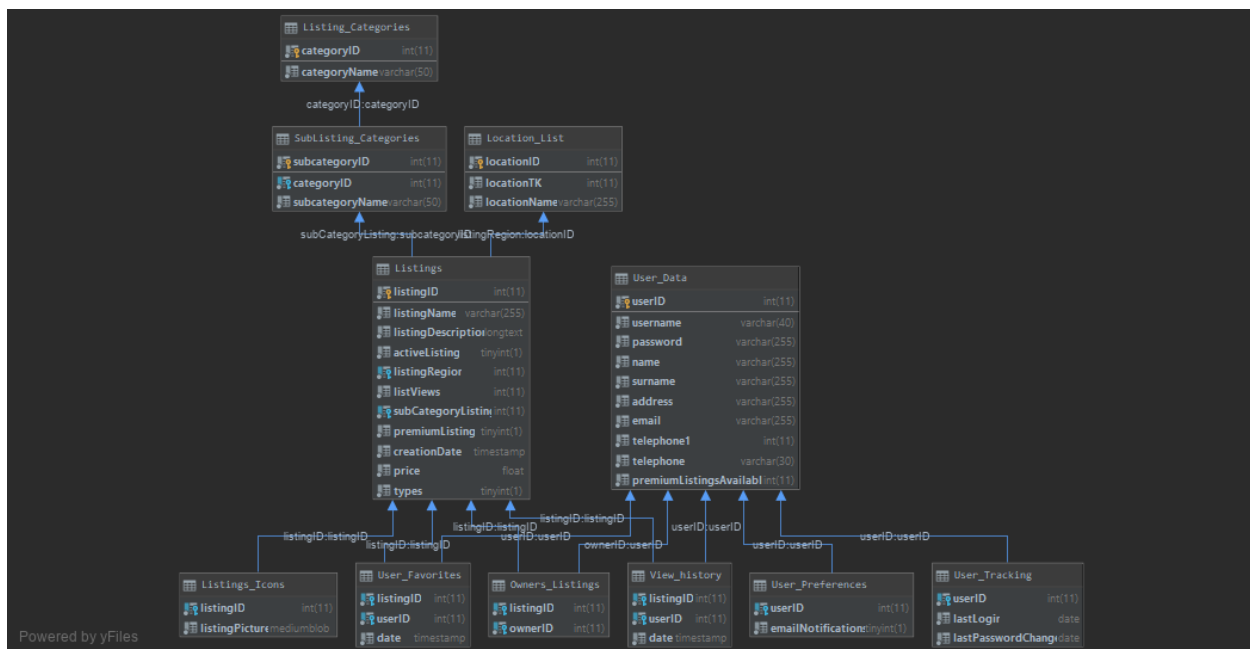
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12/1/2020

Changes:

- Listings:
  - Add:
    - Now listings table has premiumListing Boolean which identifies if a listing is premium or not
    - creationDate timestamp has been added
    - price float has been added to identify the price of a listing
    - types Boolean has been added to identify if a listing is "Looking for" or "Selling"
  - Removed:
    - listingPicture blob has been removed, now it is a table

- User\_Favorites:
  - Add:
    - date timestamp identifies when the user has added a listing to his/her favorites
- User\_History:
  - Add:
    - date timestamp identifies when the user has seen a listing.
- User\_Data:
  - Add:
    - premiumListingsAvailable identifies how many more premium listings user has
  - Change:
    - password varchar(255) from varchar(40)
    - name varchar(255) from varchar(40)
    - surname varchar(255) from varchar(40)
    - email varchar(255) from varchar(40)
    - telephone varchar(30) from int
  - Removed:
    - listingPicture blob has been removed, now it is a table



ER final diagram