GREG’S LIST

Final Technical Report

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# Team Members

Amanda Doyle – Head Android Developer & Head of Design

Carter Dewey – Chief Website Developer

Bobby Santoski – Middleware Specialist

Greg Walters – Database Manager

Morgan Winslow – Database Specialist

As Head Android Developer, Amanda spent the early part of the project designing and

Developing the Android application. As the project progressed, she designed the style aspects

of the website and integrated those into the functionality of the web client. Carter Dewey

developed the JavaScript components of the website and contributed to the back end

functionality to develop the core of the web client. Bobby Santoski specialized in the

middle-ware components of the web client functionality using mainly PHP and additional

JavaScript. Morgan Winslow specialized in database management and middleware

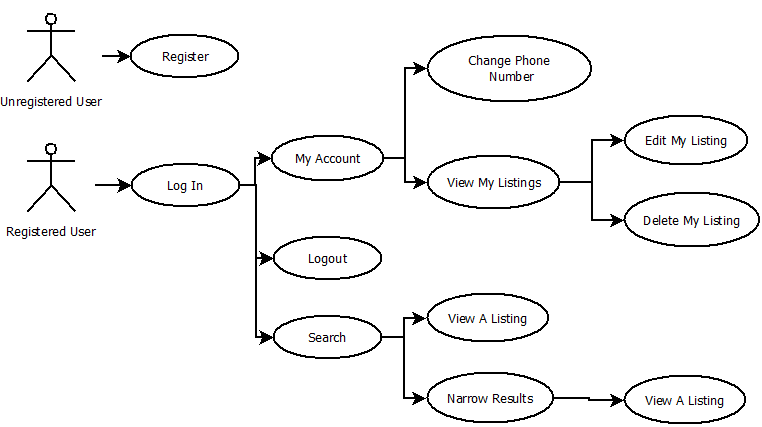
components of the web application. As Database Manager, Greg Walters came up with

the design and implementation of the database and worked alongside Bobby and Morgan

with the middleware components.

# 

# Use Case Diagram



# Software Features

WEB CLIENT

- Requires an SMU email address to register

- Requires a registered SMU email address and password to log in

- Adds new users to the database via a signup page

- Redirects users to the home page after successful signup or login

- Allows users to access their account page to edit personal information and listings they

created

- The software populates creation fields when creating a listing based on category

- Allows users to upload photos associated with their listings

- Allows users to browse listings of a selected category

- Allows users to search for relevant listings – will return results where the search term is

in the title or the description – can also search for a category and view all results from

that category

- Can filter search results by category

- Displays the five most recent listings as a slide show on the home page

- Allows users to click on the title for a listing to view full listing details

- Lists the contact information of the user who posted the listing so that potential buyers

can contact them

- Allows users to log out of the site

ANDROID APPLICATION – LIGHT VERSION

- Requires an SMU email address to register

- Requires a registered SMU email address and password to log in

- Adds new users to the database via a signup page

- Redirects users to the home page after successful signup or login

- Allows users to access their account page to view personal information and listings they

created\*\*

- Doesn’t allow users to create new listings\*\*

- Doesn’t allow users to upload photos associated with their listings\*\*

- Allows users to browse listings of a selected category from a search term\*\*

- Allows users to search for relevant listings – will return results where the search term is

in the title only\*\*

- Can filter search results by category

- Displays the 30 most recent listings on the home page

- Allows users to click on the title for a listing to view full listing details

- Lists the contact information of the user who posted the listing so that potential buyers

can contact them

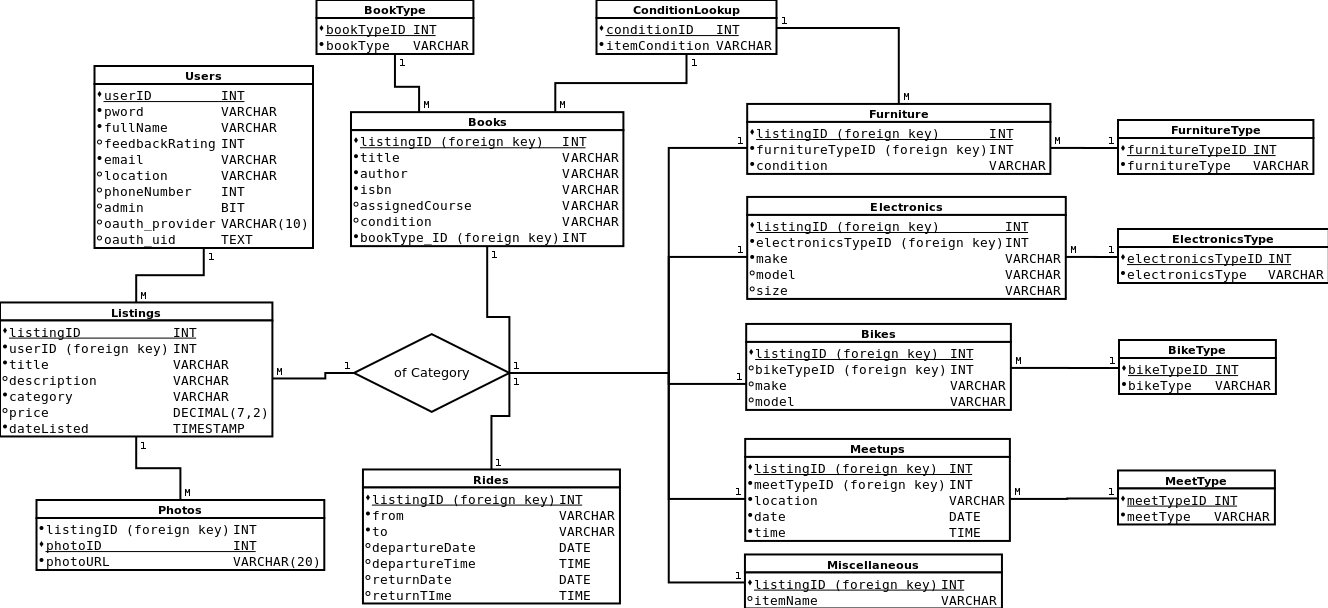
- Allows users to log out of the application

\*\*Light version differences from the web application

# Software Architecture Diagram

Morgan’s architecture diagram and explanation

# Physical Database Model



## Explanation

The GregsList database model is about linking users with classified advertisements. The

Users table contains user contact information, login information, and OAuth information for

3rd party authentication. Their unique user IDs are used to associate them with listings in the

Listings table, which contains basic information about the items being sold common to nearly

every listing. More detailed information specific to the kind of item being advertised is stored

in separate tables for each category, with integer indexes to certain repeated values like type

and condition. URLs to photos for listings are also kept in a separate table, theoretically

allowing for a listing to have any number of photos. This model allows for varying levels of

information to be retrieved as needed.

User Interface

## Web Client

## Mobile Application

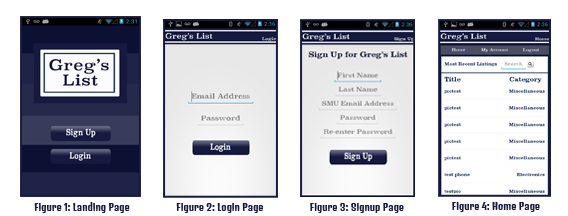




Figure 1: The landing page is the first page a user will see when they click on the Greg’s List icon.

The user has a choice to register for Greg’s List or login – they make their choice by

clicking the respective buttons.

Figure 2: Once the user clicks on the login button they will be taken to the login page. Both fields are

required and the user will receive an error message telling them which field they did not

fill in. After clicking the login button if the user information is correct they will be taken to

their home page. If their information is incorrect, they will receive an error prompt and will

be given the chance to try again.

Figure 3: If the user clicks the Sign Up button they will be taken to this sign up screen. The user must

enter information into all fields. The application will check to see if the email address is

already in the system, and if that is the case, the user will be prompted to try and sign in.

The application also makes sure the password entered is between 8 and 12 characters and

that the two passwords match.

Figure 4: The home page is where the user is taken after a successful login. The home page shows

the 30 newest listings. Each listing is clickable and will take the user to the view listing

screen. The user can also search all listings from this page by entering a keyword into the

search box.

Figure 5: The account page displays the user’s contact information as well as all of their listings.

Each listing is clickable and will take the user to the view listing screen.

Figure 6: A user can search all listings from the home page or from the search results page. All the

user has to do is type in a search term and click either the search button on the keyboard

or the search icon on the screen.

Figure 7: The search page returns all of the listings whose title contain the

search term. Each listing is clickable and will take the user to the view listing screen.

Search results can be filtered by category by clicking on any of the category buttons.

Figure 8: The view listing page shows all of the details of the listing that was clicked as well as the

contact information for the user who posted the listing.

Testing

# Team Reflection

# 2.0 Features

# Appendix A: Data Dictionary

## Users

The Users table contains user login credentials, contact information, an ID for linking to listings,

and OAuth information.

- userID is an auto-incremented integer that serves as the primary key.

- pword is the user's password

- fullName is a single text value for the name the user wishes to display

- feedbackRating is an integer meant to hold the user's feedback rating, but was not used.

- email is a text value to hold the user's SMU e-mail address

- location is a text field meant to describe which dorm or apartment complex the user lives in

- phoneNumber is an integer for storing the phone number (if any) the user wishes to be

contacted at in response to listings

- admin is a single bit used to indicate if the user has administrator privileges or not. 1 indicate

that the user has administrator privileges, 0 indicates a regular user and is the default value.

- oauth\_provider is a text value used to indicate which 3rd party authentication the oauth\_uid

belongs to.

- oauth\_uid is a text value used to store a 3rd party authentication ID.

userID is the primary key. Users has no foreign key constraints, and 1 user may have 0 to many

Listings.

## Listings

The Listings table contains descriptive information common to all listing types, a unique ID, and

the ID of the user that created it.

- listingID is an auto-incremented integer that serves as the primary key.

- userID is a foreign key used to indicate the user that created it.

- title is a text value meant to serve as a very short description of the item being listed

- dateListed is a timestamp used to indicate the time created and sort returned listings.

- category is a text value used to indicate what kind of listing it is for sorting purposes and for

looking up the detailed information

- price is a 7-place decimal to the hundreths place for storing the asking price for the item

being offered

- description is a large text value for describing the item being offered however the user

chooses

Listings has primary key listingID and foreign key userID. A user may have many Listings, and

if a user is deleted, the child Listings are deleted as well. A listing may have 0 to many Photos,

and must have one category (Bikes, Books, Furniture, Electronics, Meetups, or Miscellaneous).

## Bikes

The Bikes table contains detailed listing information specific to bicycles.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- bikeTypeID is an integer foreign key used to represent the type of bicycle and is used to look

up a text value in BikeType. This forces the BikeType to be of a type specified by GregsList.

- make is a text value to specify the brand of the bicycle.

- model is a text value to specify the model of the bicyle.

Bikes has primary key listingID and two foreign keys. A Bikes row belongs to a Listing and

is bound by foreign key listingID. If the parent Listing is deleted, the Bikes row is also deleted.

BikeType rows cannot be deleted unless they have no children in Bikes. A Bikes row belongs to

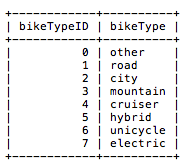
one listing and has one BikeType.

## BikeType

BikeType is a lookup table for getting text values for the different types of bicycles in GregsList.

- bikeTypeID is the primary key, currently a value between 0 and 7.

- bikeType is the text representation of a type of bike.



BikeType has primary key bikeTypeID and no foriegn keys. One BikeType may belong to many

Bikes. A BikeType row cannot be deleted while a child Bike row exists.

## Books

The Books table contains detailed listing information specific to Books.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- bookTypeID is an integer foreign key used to represent the type of book and is used to look up

a text value in BookType. This forces the BookType to be of a type specified by GregsList.

- title is a text value for holding the title of the book being sold.

- author is a text value for holding the author of the book being sold.

- isbn is a text value for holding the isbn of the book being sold.

- assignedCourse is a text value for holding the name of any SMU course that may be using the

textbook

- conditionID is an integer foreign key used to look up the condition of the book being sold.

Books has primary key listingID and three foreign keys. One Books row belongs to one Listings

row and has one bookType and one condition. If its parent Listing is deleted, it is also deleted.

# BookType

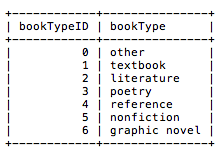
BookType is a lookup table for the types of books available on GregsList.

- bookTypeID is an integer primary key, currently a value between 0 and 6.

- bookType is a text value describing the kind of book being sold.

BookType has primary key bookTypeID and no foriegn keys. One BookType may belong

to many Books. A BookType row cannot be deleted while a child Book row exists.

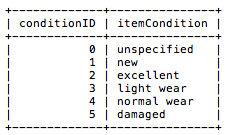


## ConditionLookup

ConditionLookup is a lookup table for the condition of used books and furniture.

- conditionID is an integer primary key, currently a value between 0 and 5.

- itemCondition is a text value describing the condition of the item being sold.



ConditionLookup has primary key conditionID and no foreign keys. One conditionID may

belong to many Books or Furniture rows. A ConditionLookup row cannot be deleted while a

child Book or Furniture row exists.

## Electronics

The Electronics table holds detailed listing information specific to electronics.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- electronicsTypeID is an integer foreign key used to represent the type of device and is used to

look up a text value in electronicsType. This forces the electronicsType to be of a type specified

by GregsList.

- make is a text value to specify the brand of the device.

- model is a text value to specify the model of the device.

- size is a text value to specify either physical dimensions, as might be the case with a television,

or storage capacity, as might be the case with an mp3 player or hard drive.

Electronics has primary key listingID and two foreign keys. One Electronics row belongs to one

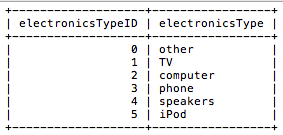
Listings row and has one electronicsType. If its parent Listing is deleted, it is also deleted.

## ElectronicsType

ElectronicsType is a lookup table for the types of devices available on GregsList.

- electronicsTypeID is an integer primary key, currently a value between 0 and 5.

- electronicsType is a text value describing the kind of device being sold.



ElectronicsType has primary key electronicsTypeID and no foriegn keys. One ElectronicsType

may belong to many Electronics. An ElectronicsType row cannot be deleted while a child

Electronics row exists.

## Furniture

The Furniture table holds detailed listing information specific to furniture.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- furnitureTypeID is an integer foreign key used to represent the type of device and is used

to look up a text value in FurnitureType. This forces the furnitureType to be of a type specified

by GregsList.

- conditionID is an integer foreign key used to look up the condition of the furniture being sold.

Furniture has primary key listingID and three foreign keys. One Furniture row belongs to one

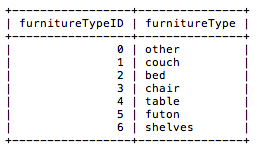
Listings row and has one furnitureType. If its parent Listing is deleted, it is also deleted.

## FurnitureType

FurnitureType is a lookup table for the types of furniture available on GregsList.

- furnitureTypeID is an integer primary key, currently a value between 0 and 6.

- furnitureType is a text value describing the kind of furniture being sold.



FurnitureType has primary key furnitureTypeID and no foriegn keys. One FurnitureType

may belong to many Furniture rows. A FurnitureType row cannot be deleted while a child

Furniture row exists.

## Meetups

The Meetups table contains detailed listing information specific to a group meeting rather than

the sale of an item.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- meetupTypeID is an integer foreign key used to represent the type of gathering and is used to

look up a text value in MeetupType. This forces the MeetupType to be of a type specified by

GregsList.

- location is a text value describing where the gathering will take place

- date is a date value describing the day on which the gathering will take place

- time is a time value describing the time at which the gathering will start

Meetups has primary key listingID and foreign keys listingID and meetupTypeID. A Meetups row

belongs to one Listings row and is deleted if the parent listing is deleted. A Meetups row has one

MeetupType.

## MeetupType

MeetupType is a lookup table linking a meetupTypeID to a text description of the kind of gathering.

- meetupTypeID is an integer primary key, currently a value between 0 and 3.

- meetupType is a text value describing the type of gathering

MeetupType has primary key and foreign key meetupTypeID. One MeetupType belongs to

one Meetups row. A MeetupType row cannot be deleted while a child Meetups row exists.

## Miscellaneous

Miscellaneous is a table to serve as a catch-all for whatever listings do not fit another

GregsList category.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- itemName is a text field that can store a short descriptor for an item, but is not used in

the final design.

Miscellaneous has primary and foreign key listing ID. Miscellaneous rows each belong to

one Listings row. If the parent Listings row is deleted, the child row is also deleted.

## Rides

Rides contains detailed listing information for carpooling rather than the sale of an item.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

It also serves as the primary key.

- leavingFrom is a text value describing the location from which the driver will leave

- goingTo is a text value describing the destination to which the driver is going

- departureDate is a date value describing the day on which the driver will leave

- departureTime is a time value describing the time at which the driver will leave

- returnDate is a date value describing the day on which the driver will return

- returnTime is a time value describing the time at which the driver intends to return

Rides has primary key and foreign key listingID. A Rides row belongs to one Listings row and is

deleted if the parent listing is deleted.

## Photos

Photos links listings to photos stored in the server.

- listingID is an integer foreign key used to indicate which Listing the information belongs to.

- photoID is an integer primary key used to order and keep track of the photos.

- photoURL is a text value that holds the file name of the photo

Photos has foreign key listingID and each Photos row belongs to one Listings row. A Listing

may have more than one photo. If a parent Listing is deleted, all child Photos are deleted.