Carbon Counter Screen Sketches
Team TC_04

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Actors and Functionality

- Typical user
  - This role will comprise the majority of the user base. It is the default role for anyone who creates an account through the app.
  - Submit stats for their own account.
  - View history for their own account.
  - View tips on how to lower their carbon footprint.
  - Change user settings.
- Creator
  - Creators will have the ability to add additional tips to the database and expand the app.
  - All permissions of a typical user, plus:
  - Submit tips for lowering specific categories of the carbon footprint
    - Must be approved by admin first
  - Suggest edits for existing tips
    - Must be approved by admin first
- Administrator
  - All permissions of a creator, plus:
  - Can approve creator submissions and edits
  - Can delete tips
  - Can view other users accounts
- Developer
  - Full access to all systems
  - View other accounts
  - Create and edit tips
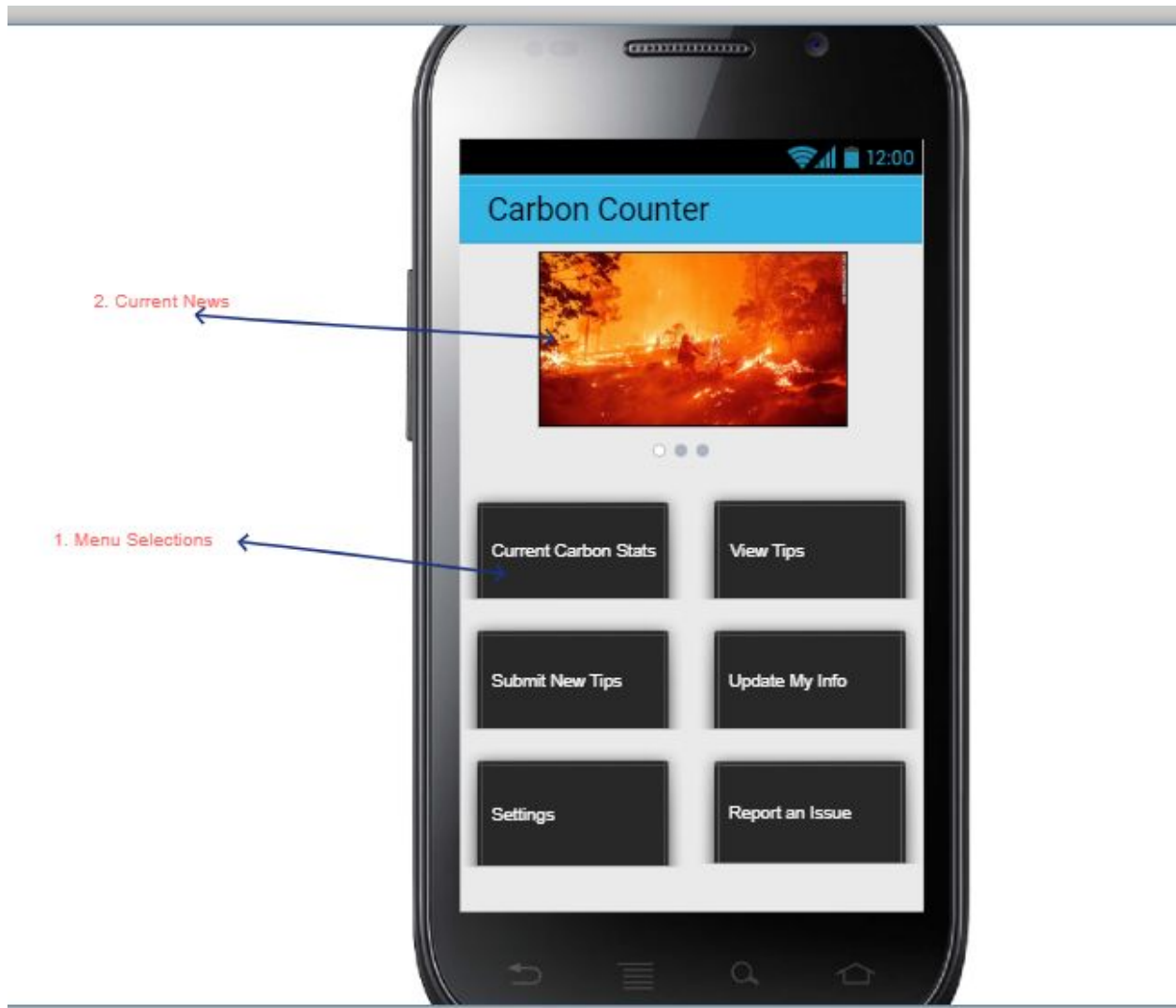 - Add or remove accounts

Non-functional Requirements

1. Performance
   a. Fast response times
   b. Quick data loading
2. Maintainability
   a. Easy to moderate users
   b. Easy to add, remove, and edit tips
   c. Easy to update code
3. Reliability
   a. The server has little to no downtime and can be connected to reliably.

Tables and Fields needed

- Users table
  - A list of all users registered into the system
  - User name
    - Unique identifier
  - Email
  - Password
  - Role
- Permissions
  - User name
  - Role
  - All permissions as attributes
- Tips table
  - A table containing all the tips that have been submitted into the system. Working columns contain live edits from creators, administrators approve these edits and the fields are copied to the publicly visible fields.
  - Tip id
  - Title
  - Working title
    - Used for editing, not shown to users
  - Category (what part of the footprint does it reduce)
  - Working category
  - Body (paragraph explaining the tip, rich text field)
  - Working body
  - Citations and additional links (links to outside resources to learn more)
  - Working citations
  - Tip status (pending approval, approved)
- User stats table (possibly local database)
  - Contains the statistics of all users, each entry represents the statistics for that day
  - User id
  - Date
  - Water used
  - Miles driven
  - MPG
  - Amount of meat eaten
  - Amount of garbage disposed
  - Efficiency of appliances
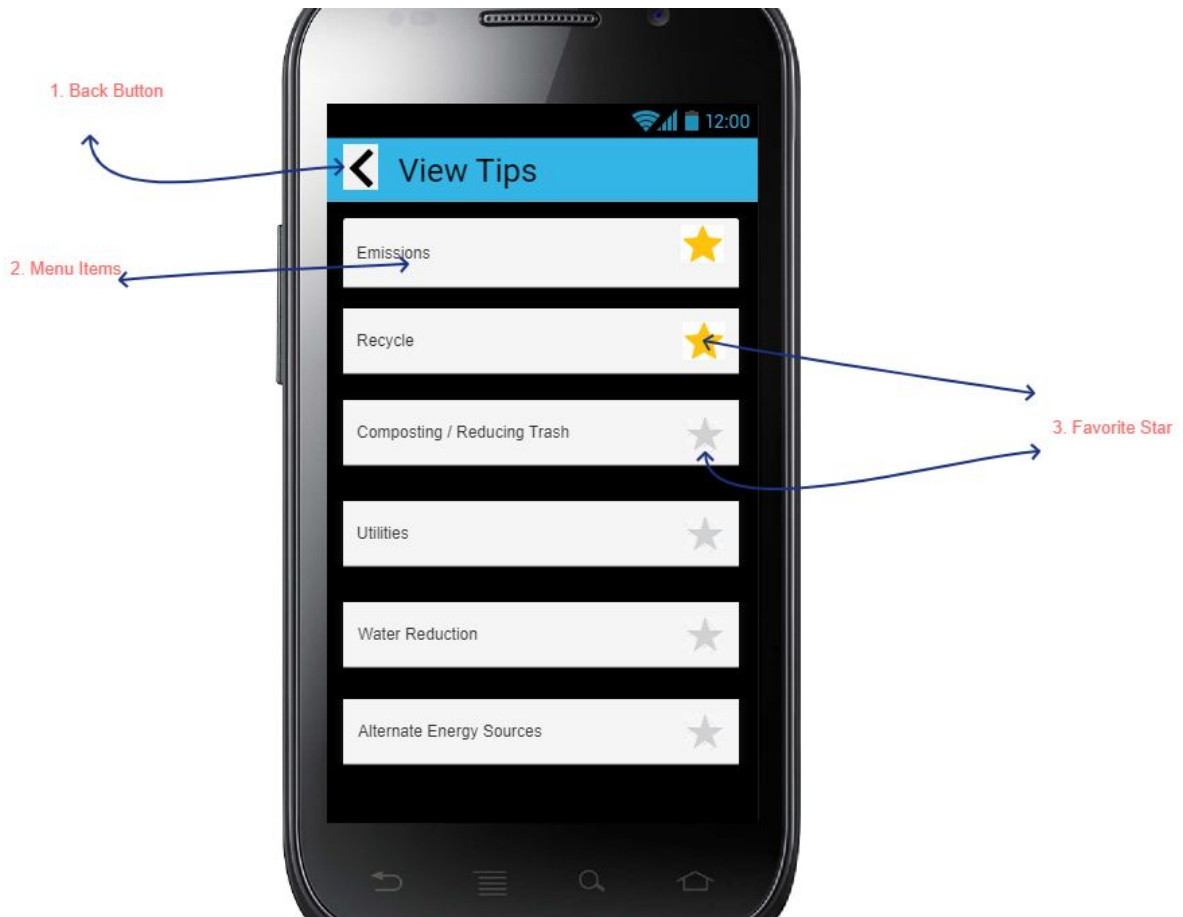 - Other stats...

Screen Flow Diagram

Enter new Info Page (Morgan)

User selects Update Info button

Current Carbon Stats/ Progress(Monthly) (Morgan)

User selects Improvement button

View tips/ Categories (Zachary)

Results for topic

Loads into new info page to initialize statistics for new user

User Selects update info Preview button

User Selects stats Preview button

User Selects Tips Preview button

Submitted to Appropriate Categories

Create User Page

After completion page moves to Home Page

Home Page (Zachary)

preview   preview

preview   preview

User Selects Submit Tips Preview button

Submitting Tips (Andrew)

Loads Page after submission

Awaiting Approval / approving

Go Back Button

User selects New User Button/Link

If User has Client Credentials

User Selects Settings Preview button

User selects logout button

Settings

Enter app for first time

Login Page

If User has Admin Credentials

Access Approval Page

Admin Overview Page (Colton)

The carbon counter app allows the user to track their own carbon footprints and make necessary changes to improve their impact. This is the home page for our application where the user can navigate to their desired location. Whether that be their settings or new tips on reducing their trash output can all be accessed from this page.

1) These are all of the locations that the user can access from the home page. Starting from the top left corner, Current Carbon Stats will take the user to see their stats graphically. Then view tips will take the user to browse from categories of tips. The submit new tips will allow the user to suggest new tips. Update My Info the user can make changes as they improve. Settings the user can adjust some minor settings and log out. Then the user can report any application issues.
2) This will be a slider of current news or breaking news related to climate change.
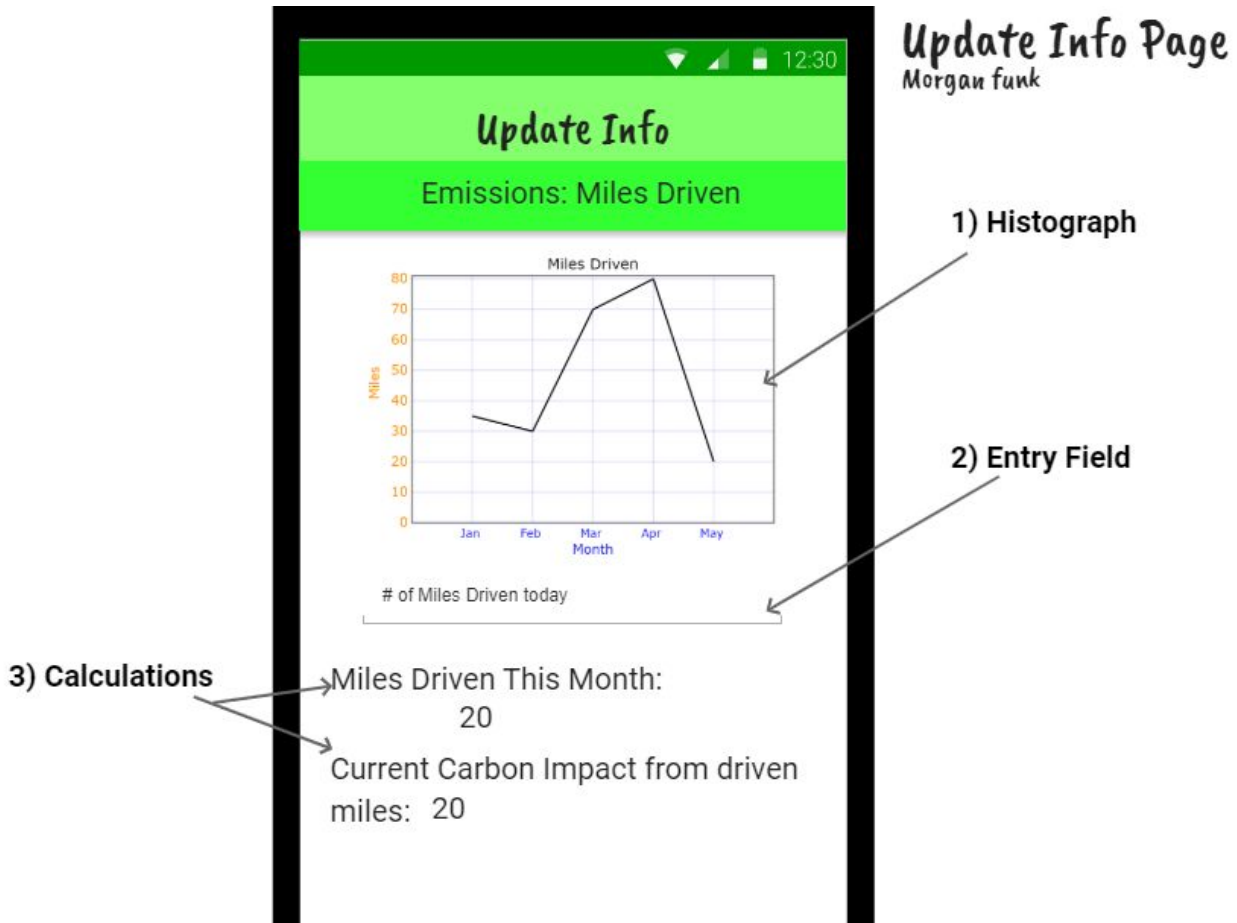
This page is used for navigating tips, this is an overview of tip categories. Once the user clicks one they will be taken to the more specific results page.

1.) The back button will return the user to the home page.
2.) Menu Items, these items will redirect the user to the more specific results page.
3.) Favorite Star will bring all of the user's favorite categories to the top of the screen so they don't have to search for ones they use often.
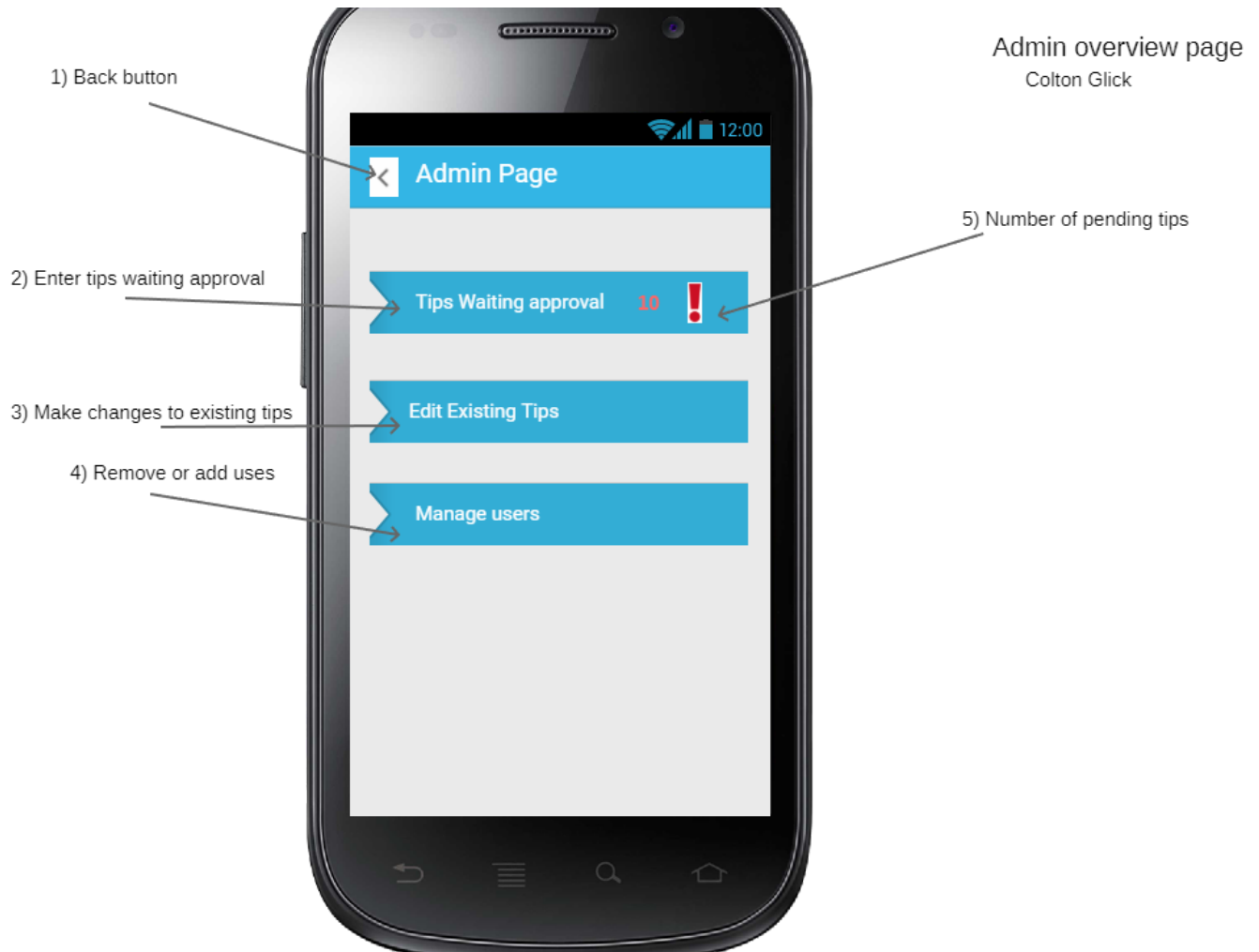
The purpose of this screen is to give the user both visual and numerical feedback on their current progress towards improving their carbon footprint. The user can then select whichever category they feel they need improvement in based on their feedback and work towards those specific areas. If a user needs to update information for the current month they may select an option from the selection tab which will then link them to the Enter New Information page.

1) **Bar/Visual Element** - This element is used to give the user feedback on their progress history from the last few months up until the current month by displaying the information visually in a bar graph./other visual element format.

2) **Drop Down Menu -** A menu that allows the user to select the current or previous months (for as long as they have been in the system) and then display a breakdown of emissions caused by different in that month.

3) **Category Tab -** Tab used to select more generalized categories of waste/emissions that the user can then see the data on by updating the other elements on the page.

4) **Selection Tab -** The selection tab breaks down the category into individual statistics that link to the corresponding Enter New Information page. This will allow the user to quickly update information and see the feedback for the current month to be updated.

This page is actually going to be the basis for a few other entry pages that are dictated by which information the user feels they need to update. This page will give prior feedback of the specific stat they are updating and will be able to see immediate feedback from a total and the computed environmental impact from the said total.

1. **Histogram/Visualization -** This will be some form of visualization given to the user based on previous data. This will allow the user to see where they may need improvement.
2. **Entry Field -** This is where the user may type in a numerical value to update the current month's data.
3. **Calculations -** This page will immediately show the total monthly statistic alongside a calculation of the impact of the statistics on their carbon footprint.

1) Back button

5) Number of pending tips

2) Enter tips waiting approval

Admin Page

Tips Waiting approval   10   !

3) Make changes to existing tips

Edit Existing Tips

4) Remove or add uses

Manage users

The admin overview page will provide a home page for admin uses to approve pending tips, edit any existing tips in the system, and add or remove users. This will be accessible only if the user as the admin role. This is where the admin users will be spending most of their time.

1) The back button will return the admin user to the login page.
2) The tips awaiting approval bar will take the user to a listing page containing all tips that have been submitted or edited by creators but have not been approved by an admin.
3) The edit existing tips bar will take the admin user to the view tips page, with the added permissions to edit or remove tips.
4) The manage users bar will take the admin to a list of all users currently signed up for the app. There they can remove, or add users to the database.
5) This number will appear on the tips waiting for the approval bar if there are some number of tips waiting. If there are none, it will turn to a green checkmark.

1) Back button

2) Search Tips waiting approval

3) Search Tips Via Voice

4) Tip card

5) Tip Type

6) Tip Title

7) Tip Body

8) View Tip

Approve Tips

Type: Emissions
How to reduce daily driving
Lorem ipsum dolor sit amet, consectetur ...

Type: Emissions
This one easy trick will reduce your carb...
Lorem ipsum dolor sit amet, consectetur ...

Type: Water Reduction
Turn the tap off!
Lorem ipsum dolor sit amet, consectetur ...

The waiting for approval page will display any new tips submitted by creators and any tip edits that are waiting for approval by admins. This page is only accessible through the admin page and you must be an admin to approve or reject submissions.

1) The back button will return the admin user to the admin home page
2) The search bar can be used to search the titles of tips waiting for approval
3) The voice search button will enable the default speech to text engine and allow the admin to search the tips by voice.
4) Each tip or edit waiting for approval will appear in the list as a card, the list will expand downward and the admin can scroll up and down the list by swiping
5) The tip type displays the category that the tip deals with, emissions, water reduction, recycling, or some other user-defined category.
6) The tip title displays the title given to each tip by the creator.
7) The tip body displays a preview of the body of the tip from the creator.
8) The view tip button will take the admin to the tip page where they can view more details about the tip and approve it or reject it.
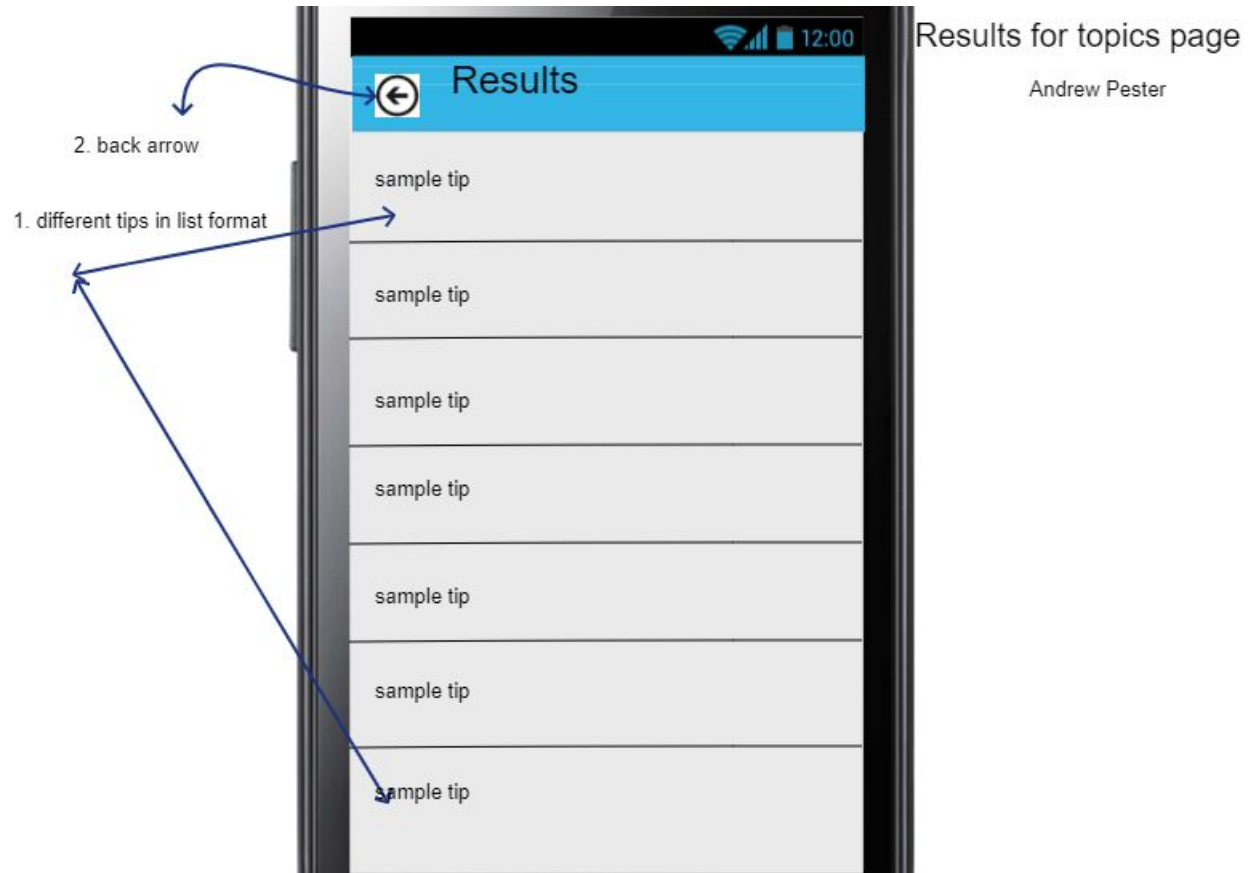
Submitting a tip page

Andrew Pester

The purpose of this page is to allow the user to submit some possible ways people can reduce their emissions in their lives. These tips are then evaluated by an administrator and they are either accepted or denied depending on the validity of the tip.

1. The type of emission selector will allow the user to select which type of emission their tip would be relevant to.
2. The text box allows the user to input their tip
3. The cancel button will allow the user to not submit their tip if they don't wish to do so and will take them back to the home page
4. The submit button will submit their tip for evaluation

Results for topics page

Andrew Pester

These are the results for the topics depending on what you searched. It will show you different tips to help you lower your emissions depending on what you searched.

1. This is a list of all the different tips for whatever topic you might have searched for.
2. The back arrow will take you back to the search page to allow you to search for different tips.