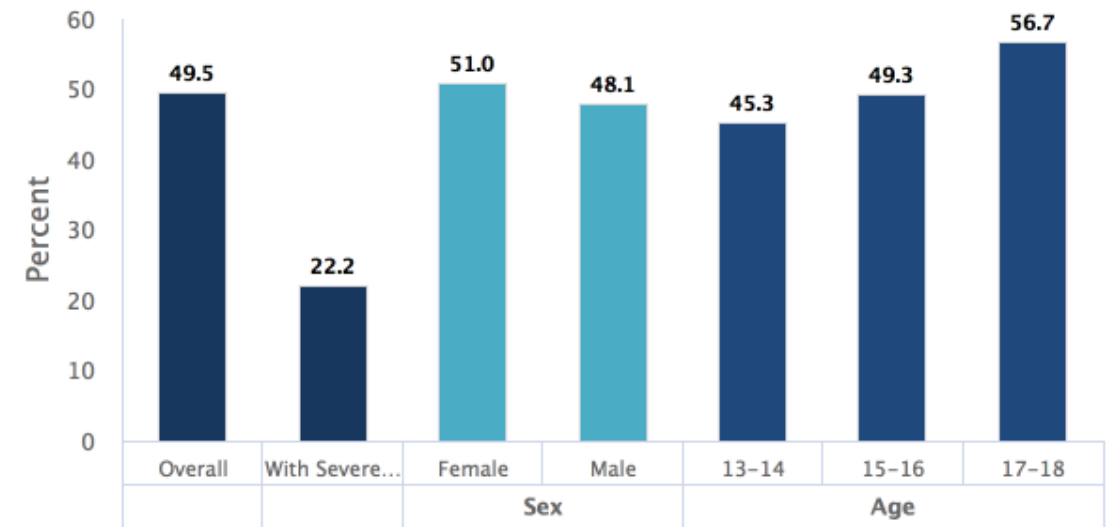# Mood Patterns

Isaac Lau, Caroline Quinn, Matt Suyer

Background

- Mental health is becoming a big problem for the youth, with almost half of all adolescents having some type of disorder.

- There is a lack of mental health services and tools to help adolescents struggling with mental illness.

- We are aiming to help adolescents, primarily middle schoolers and young high schoolers.

- We hope to help this audience better understand their moods in relation to their activities.

Lifetime Prevalence of Any Mental Disorder Among Adolescents (2001–2004)
Data from the National Comorbidity Survey Adolescent Supplement (NCS–A)

Category	Percent
Overall	49.5
With Severe...	22.2
Female	51.0
Male	48.1
13–14	45.3
15–16	49.3
17–18	56.7

Competitors

- Many mood tracking apps present the user with some basic features

- They lack custom user inputs, in-depth statistical analysis, and charge an annual premium.

- These apps are congested, with many menus bombarding the user.

- There are few apps that are tailored to middle-school-aged children that are organized and include custom inputs and statistical analysis of user inputs for free.
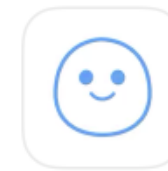
Feelings Diary - Mood Jou...
Secret Mood Diary with Lock
★★★★★ 544
GET
In-App Purchases

Moodpath: Depression &...
Stress, Depression & Anxiety
★★★★★ 23K
GET
In-App Purchases

Daylio Journal
Super Easy Journal with Stats
★★★★★ 28K
GET
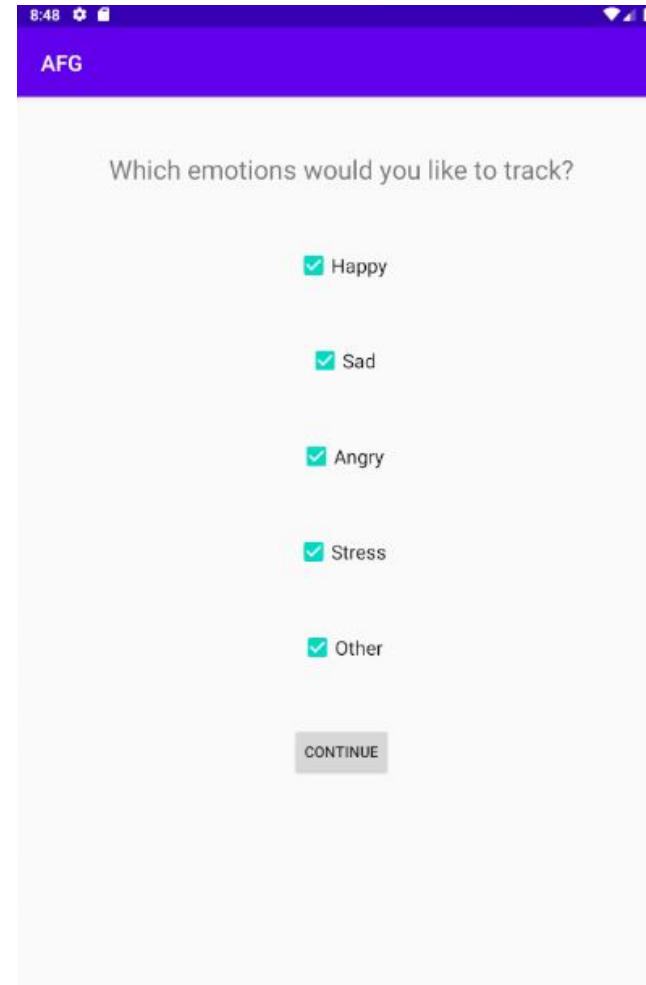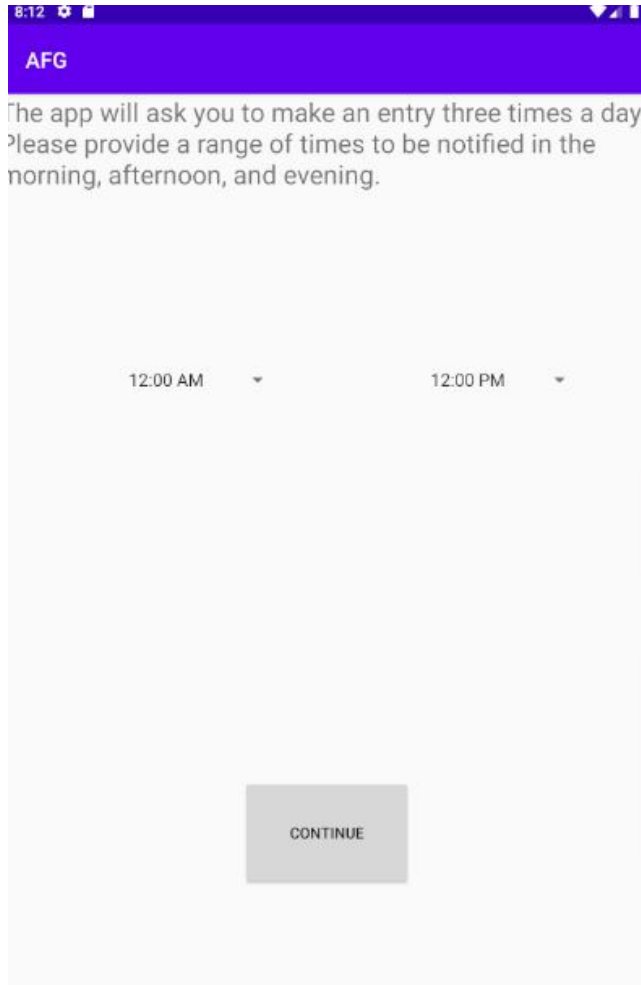In-App Purchases

Mood App: Journal
You Matter
★★★★★ 3.1K
GET

Description

- The app will prompt the user for their mood

- The app will use a correlation algorithm to

  determine any patterns from the time of day and

  their mood.

- The app will display any significant correlations in a

  sentence on the home page

Demonstration

Demonstration

Description
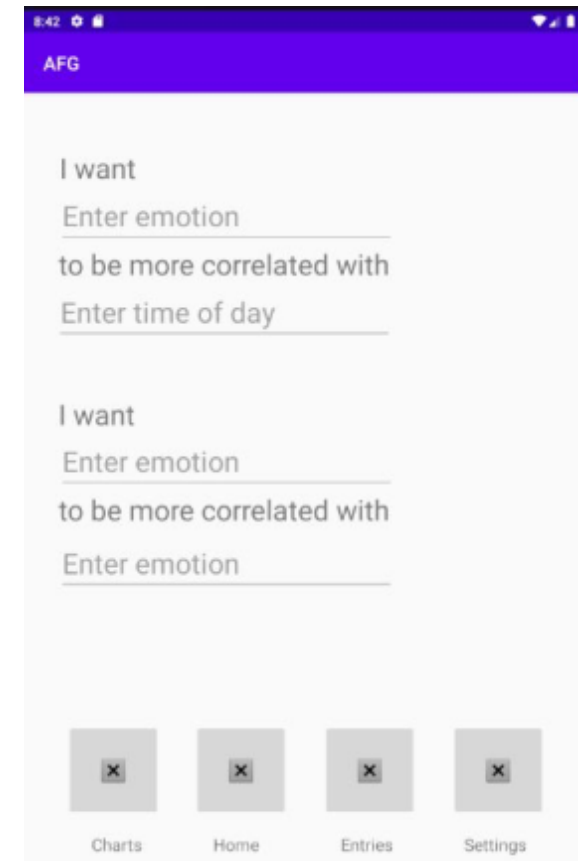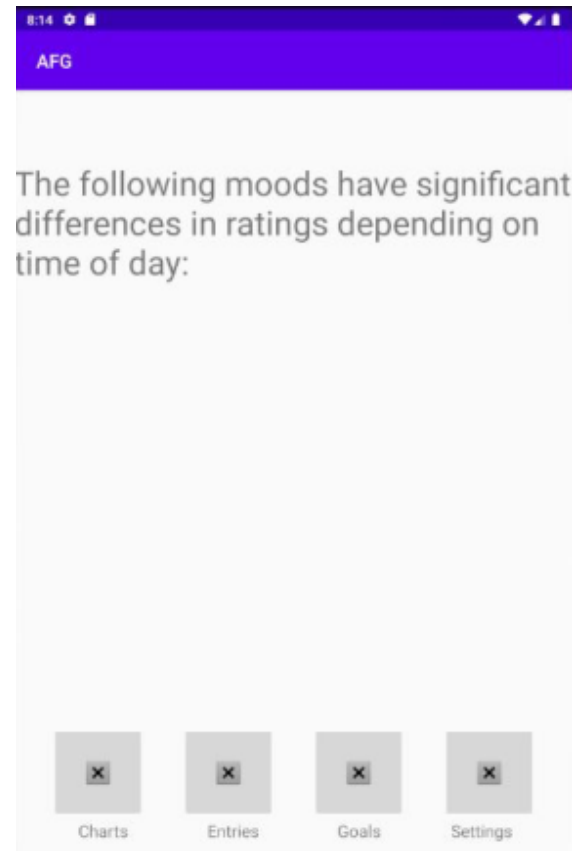
Architecture
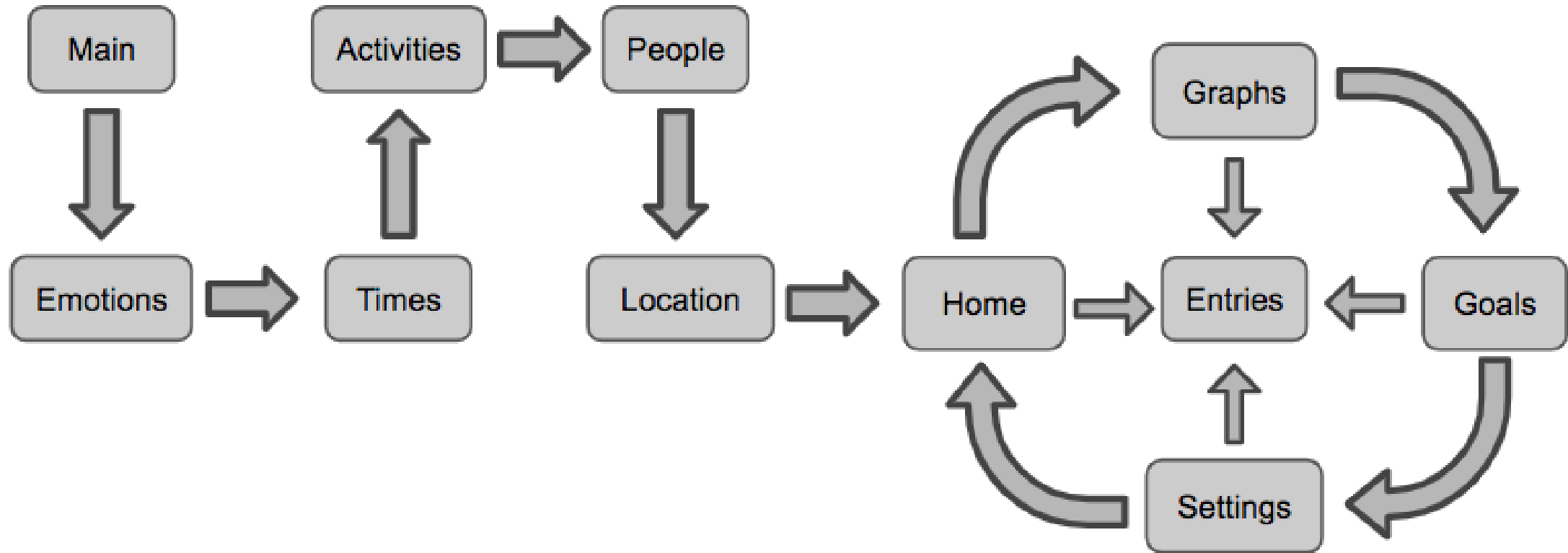
Algorithms and APIs

- ## Shared Preferences
  - Stores user's preferred emotions
  - Populates dropdown menu with saved emotions

- ## CSV
  - User entries are temporarily stored, then written to a CSV file
  - Entry objects are then created from the CSV data, which consist of an emotion, the rating the user gave that emotion, and the timestamp at which the Entry was created.
  - The OpenCSV API was used to read data from CSV files.

- ## Algorithm
  - Entry objects are put into an ArrayList and passed into the Algorithm
  - They are based on emotion and put into separate ArrayLists.
  - The Algorithm performs an Analysis Of Variance (ANOVA) test to determine if there is a significant difference between the emotion rating and time of day.
  - If there is a statistically significant difference in ratings, that emotion is displayed on the home page.

Future Extensions

- Improve the algorithm so that it can differentiate between more emotions and variables

- Add different colors and pictures to make the app more aesthetically pleasing.

- Customizability
  - Add custom emotions
  - Add custom variables that could affect emotions

- SharedPreferences boolean to only show opening screens once