

# eXchange: a **better** way to meal exchange

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*a COS 333 project*



# introduction

- why do we need eXchange?
- what does eXchange do?

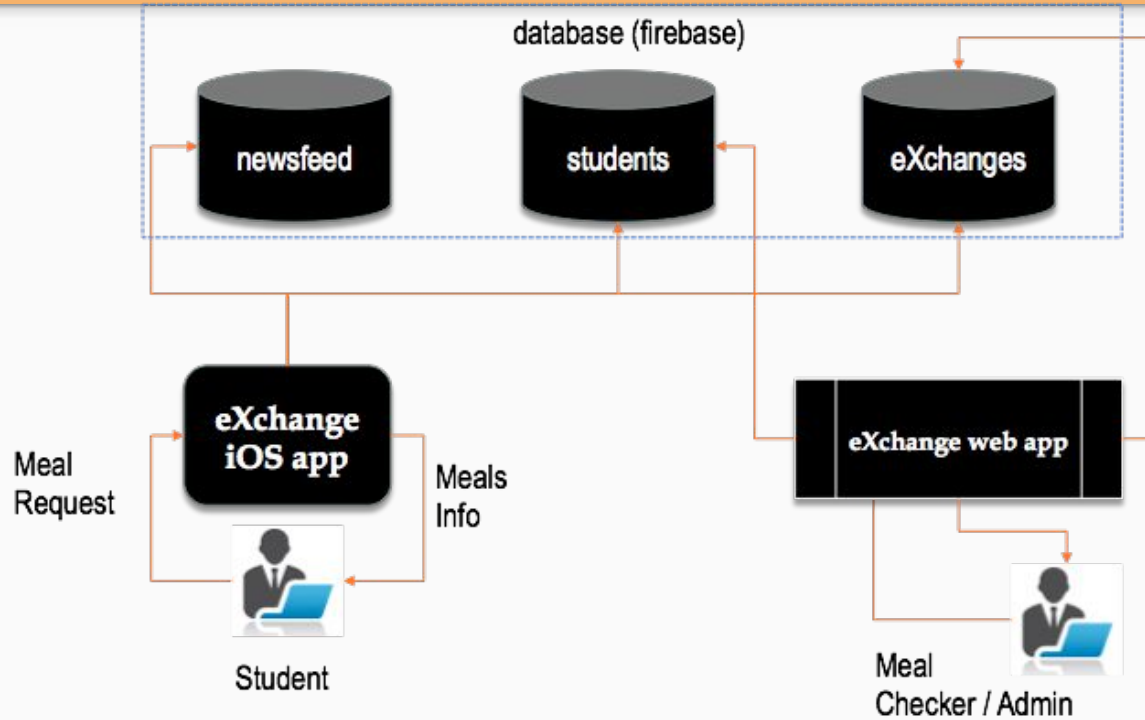
# demo

- iOS app: schedule meals w/friends in other eating clubs
- webapp: confirm scheduled meal exchanges & edit member lists as students join, drop, or graduate
- let's see eXchange in action!

# architecture & implementation

- firebase
- iOS app
- web app

# design overview



# firebase

- non-sequel database
- common database with which both apps interact
- stores data in JSON format

<https://princeton-exchange.firebaseio.com/#>

# iOS app

- coded in swift using Xcode
- each user has own account
- authenticated using Princeton CAS
- allows students to schedule meals with students in other eating clubs
- stores meal data for each student
  - keeps track of unfinished meal exchanges
  - past exchanges
  - upcoming exchanges
- newsfeed feature incorporates social component

# web app

- coded in html, css & javascript using bootstrap, jquery and firebase APIs
- allows clubs to 1) manage member lists 2) confirm exchanges pre-scheduled on the iOS app 3) view lists of complete and incomplete exchanges and 4) create exchanges
  - self-standing system for meal exchange, allowing students without an iOS device to meal exchange
- each club has its own account
- authenticated w/ firebase email/password authentication so that only club meal checkers can access the system



- iOS prototype
- HTML template

- HTML/CSS template
- iOS minimum viable product
- postgres database

- both iOS and web apps interacting w/ new database
- minimum viable product achieved

week 1

week 2

week 3

week 4

week 5

week 6

- iOS frontend coding in swift
- django web app begins

- postgres and django abandoned
- switch to firebase made

- both apps working w/ all desired functionality and interacting w/ each other

# (not so) disastrous failures

- considered developing Android app
- postgresSQL
- integrating django and iOS app
- last night... (this one WAS disastrous)
- but we learned so much!

# one last question

- what do we do with all the blue slips?!

# after dean's date

- ICC adoption! @samsmiddy looking at you
- integration with dining hall/eating club exchange system
- options for independent students