QuikPik: The Humble Beginning

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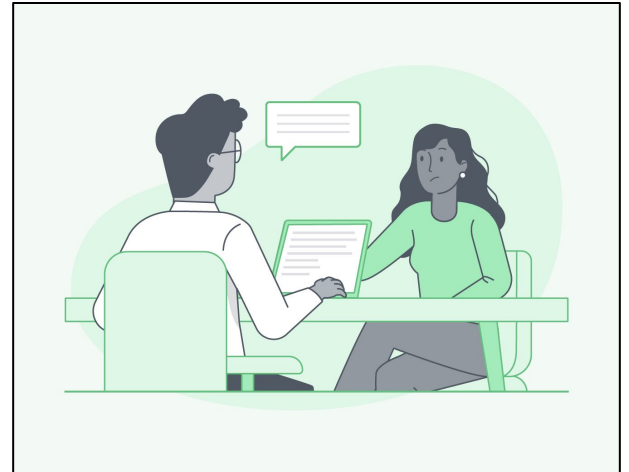Carson Mummert
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Problem Introduction

- You and your friends are deciding to watch a TV series together because we are all stuck at home because quarantine and want something fun to do together. It takes forever to have everyone agree on what to watch because everytime a new idea is brought up it takes time to describe what it is and go through the whole process. But what if there was a quicker way.

- QuikPik is an app that helps streamline that issue by having the users all vote on choices like restaurants, TV shows, movies, etc. and then picking the best solution for the group
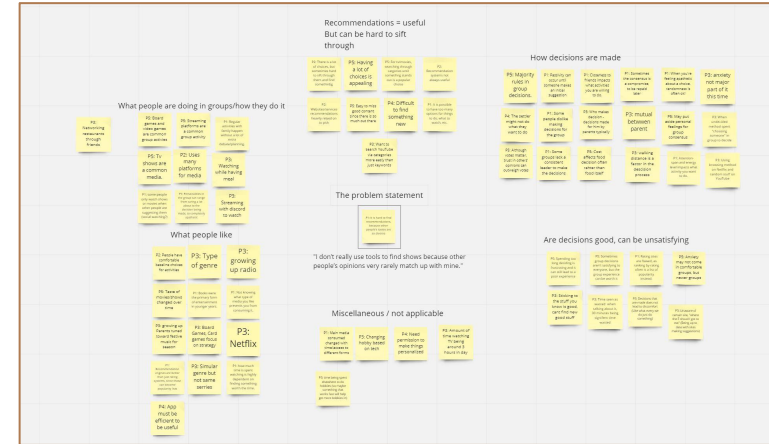
Formative Research: Problem Statement and Semi-Structured Interviews

- We, first, formalized the problem statement, as shown on previous slide
- Developed a User Research Protocol to interview subjects in an ethical and productive manner
- Semi-structured interviews:
  - Background information re: media consumption
  - Current consumption habits
  - Decision making as a group
  - Google questionnaire/survey
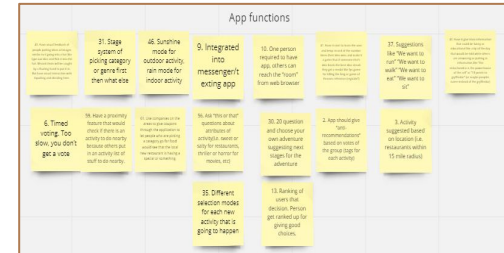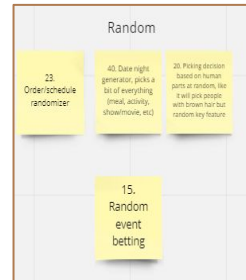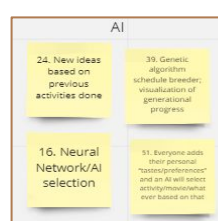
Qualitative Analysis

- Qualitative analysis carried out on interview transcripts
- Open-coding: selecting important information from transcripts, writing a short phrase explaining what is valuable about the quotation
- Clustering Open Codes into rough categories (see image)
- Clustering led to common behaviour patterns, which informed the most essential features to include
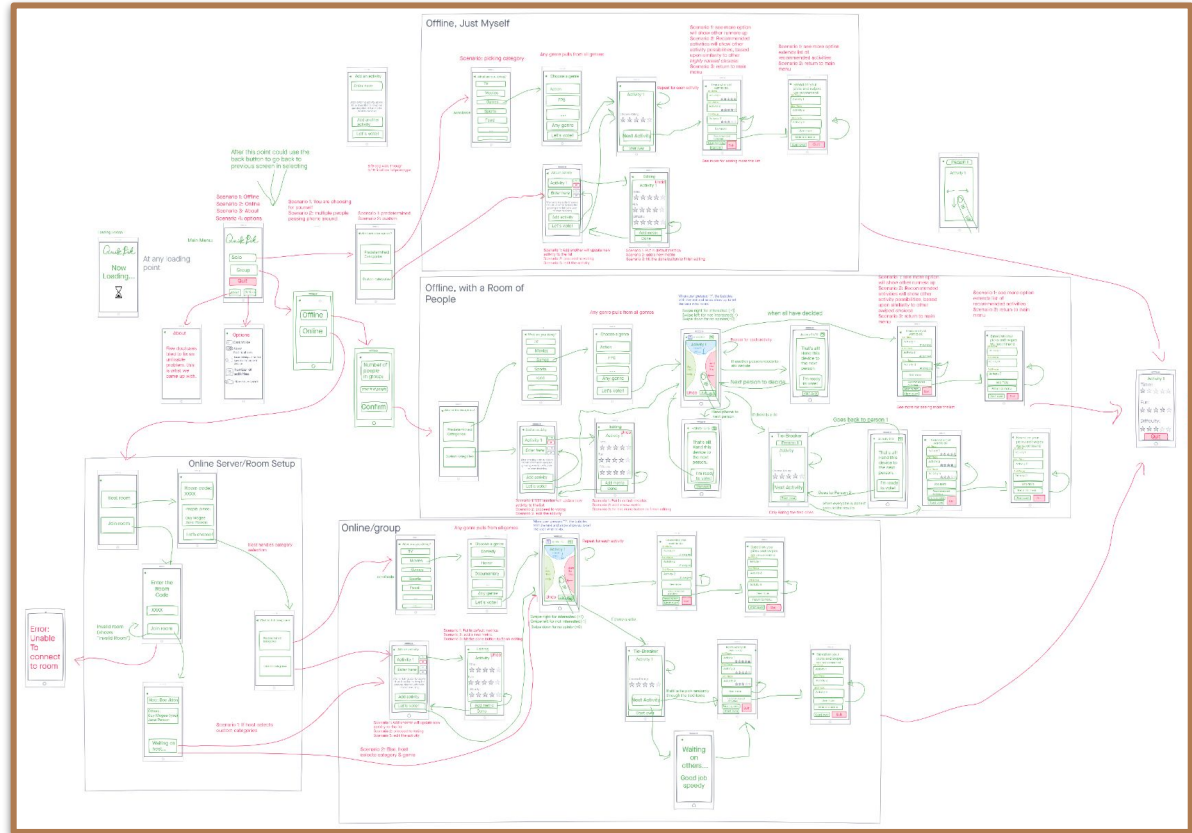
Ideation and Final Idea

- Ideation: generate a large list (75 items) of different ways to solve our problem statement
- Clustering of Ideas: 5 Categories organically arose:
    - Voting, Minigames, AI, Random Selection, and Core app functions
- Several rounds of selection and rating of the ideas pared down the list of possible ideas
- Aspects most essential to a well-designed and usable application remained, giving final app idea
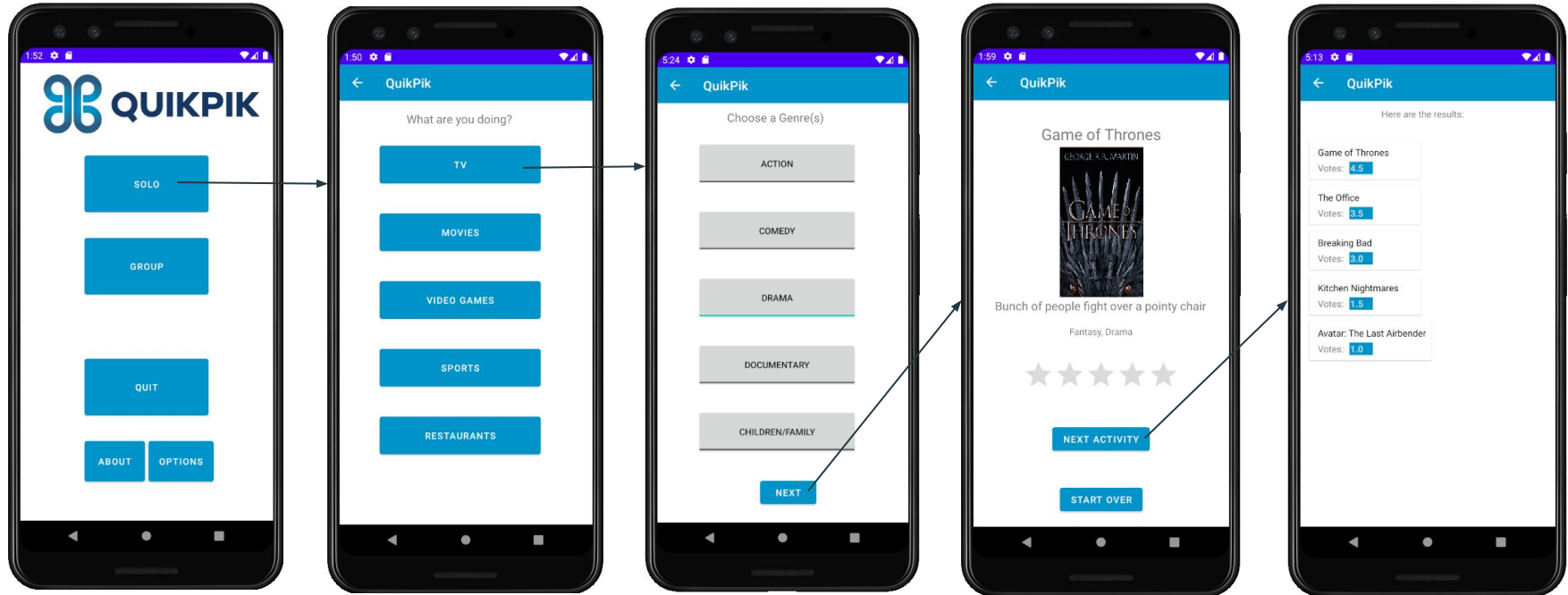
Low-Fidelity Prototype

- Cognitive walkthrough
- Heuristic Evaluations
- Final low fidelity prototype

Final App

User Testing: Methods

Method 1: User uses QuikPik to find a TV show to watch

- Formative - reveal usability errors, get user's impressions of the errors
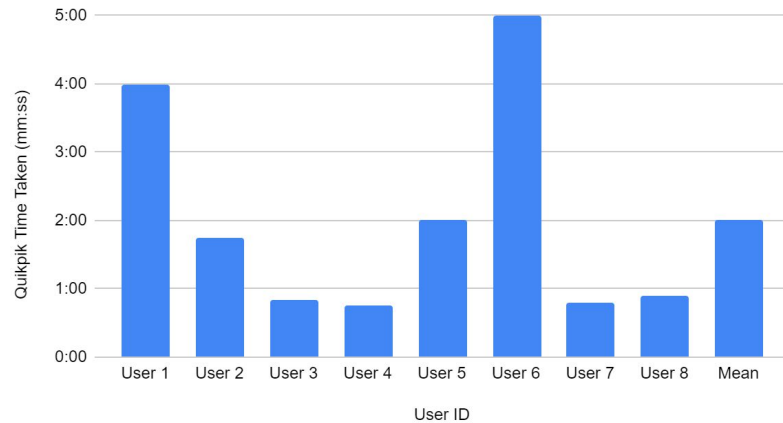- Summative - time to find a show to watch, times user presses back button

Method 2: User uses Netflix to find a TV show to watch and compares it to QuikPik

- Summative - number of users that prefer QuikPik or Netflix

User Testing: Findings

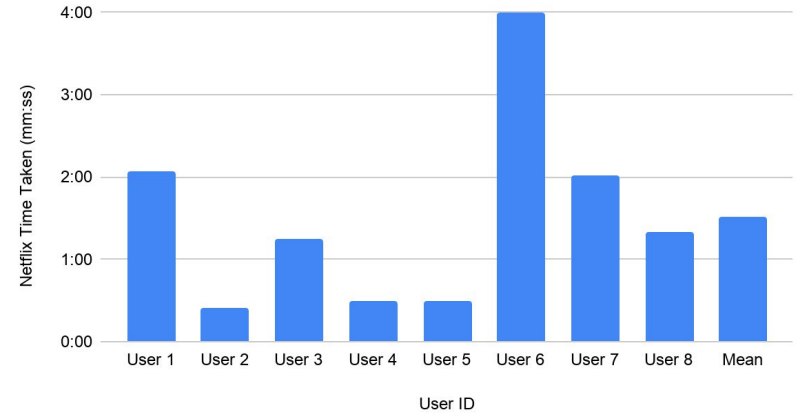Quikpik Time Taken (mm:ss) vs. User ID

Netflix Time Taken (mm:ss) vs. User ID

Statistical Analysis

Problem Statement: Does QuikPik speed up activity selection time vs. Netflix?

- Average time for Netflix was 30 seconds faster than QuikPik (120 seconds vs 90 seconds).
- Sample Standard Deviation: $s_{QuikPik}$= 91.41 seconds, $s_{Netflix}$= 67.42 second
- Can use a hypothesis test of two means

Statistical Analysis, cont

- Hypothesis test of two means tests our claim that QuikPik speeds up activity selection.
- H_0: $u_{QuikPik}$ - $u_{Netflix}$ = 0, H_A: $u_{QuikPik}$ - $u_{Netflix}$ < 0, n = 8
- Test Statistic: $((120-90) - 0) / \sqrt{[(67.42^2 / 8) + (91.41^2 / 8)]}$ = .747, p = .234
- There isn't strong evidence that QuikPik is faster than Netflix.
- Errors with Test / Confounding Conditions:
  - Familiarity with Netflix and/or unfamiliarity with QuikPik
  - Small sample size, high sample variance (s = $\sqrt{[\sigma_{QuikPik}^2 / n_{QuikPik} + \sigma_{Netflix}^2 / n_{Netflix}]}$)
  - Selecting a show that they are familiar with on Netflix, rather than something new which is the primary purpose of QuikPik
- 95% Confidence Interval for difference in time selection between Netflix and QuikPik
  - $(120-90) +/- 1.645 * \sqrt{[(67.42^2 / 8) + (91.41^2 / 8)]}$
  - Result: (-36.06 seconds, 96.06 seconds)
  - Same errors / confounding conditions apply

User Testing: Findings

App specific problems:
- App is unclear on what predetermined and custom categories are
- The star/rating bar at the bottom is somewhat ambiguous
- The rating screens had no images, nor playback functionality for the shows in the application itself
- Users needed to have the results screen explained to them

Overall findings:
- Users would like some randomness involved when given a predetermined list
- Users weren't faster at selecting TV shows from QuikPik vs Netflix
- Users often times back out on things they select from Netflix quickly if it doesn't catch their interest
- Focus should primarily be on having this app be for groups
- If the shows are not available through the app itself, to show where to find them online

Future Developments and Testing

Developments:

- Create a system that selects from a database (Netflix, IMDB, etc) for predetermined categories. Allow users to enter additional options for predetermined categories that would get saved locally.
- Finish and expand group selection.
- Add more detail to the rating system (more metrics, better explanations of ratings).
- Add functionality to show where you can watch that show, or even select platforms you own and select only from that.

Testing:

- Increase sample size so variance is lower, which would allow us to get more accurate results regarding if QuikPik is faster than Netflix.
- Give a small training session prior to testing so that the proficiency level with QuikPik is closer to that with Netflix.
- Ask participants to find a NEW activity specifically.