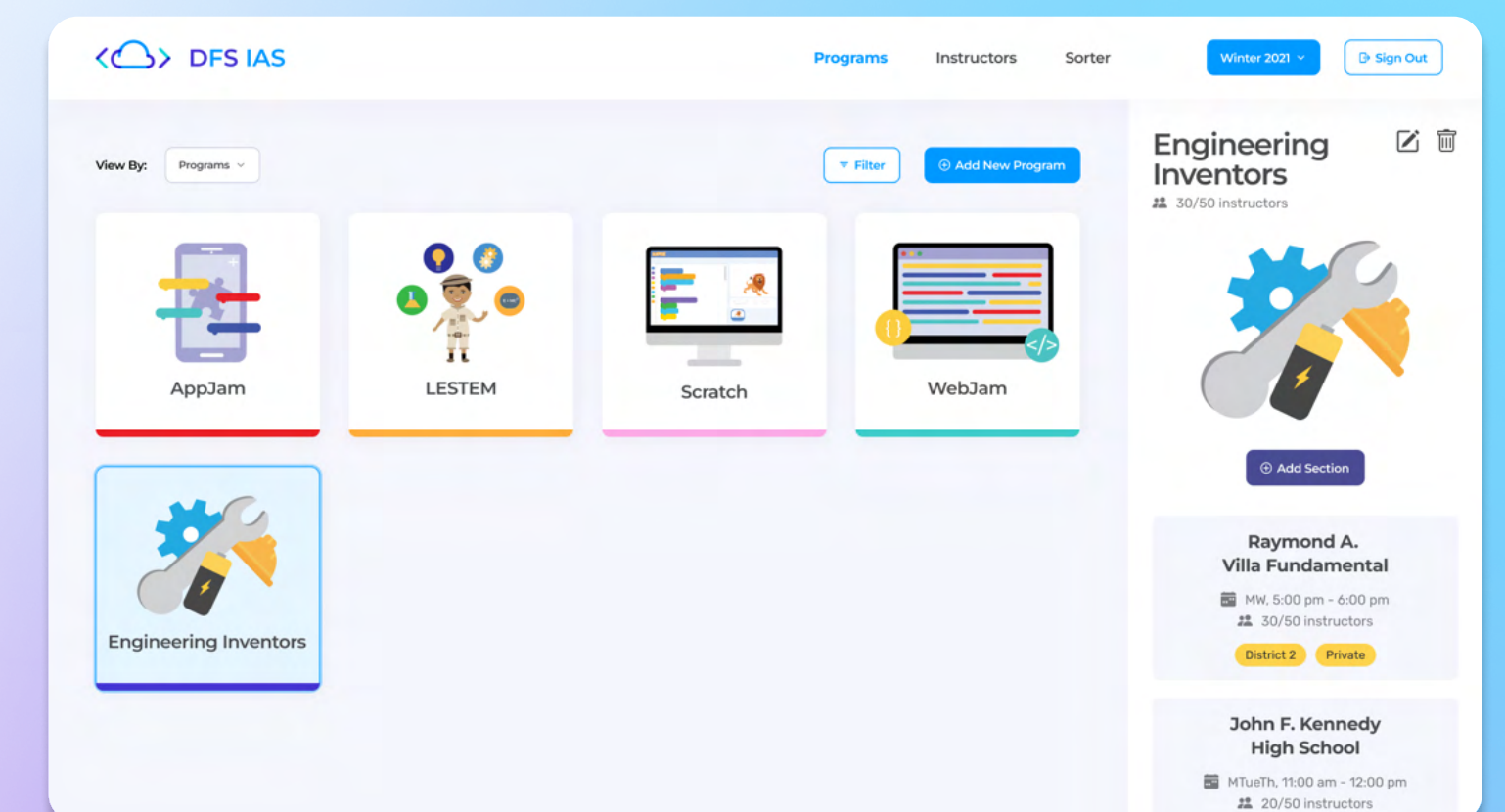
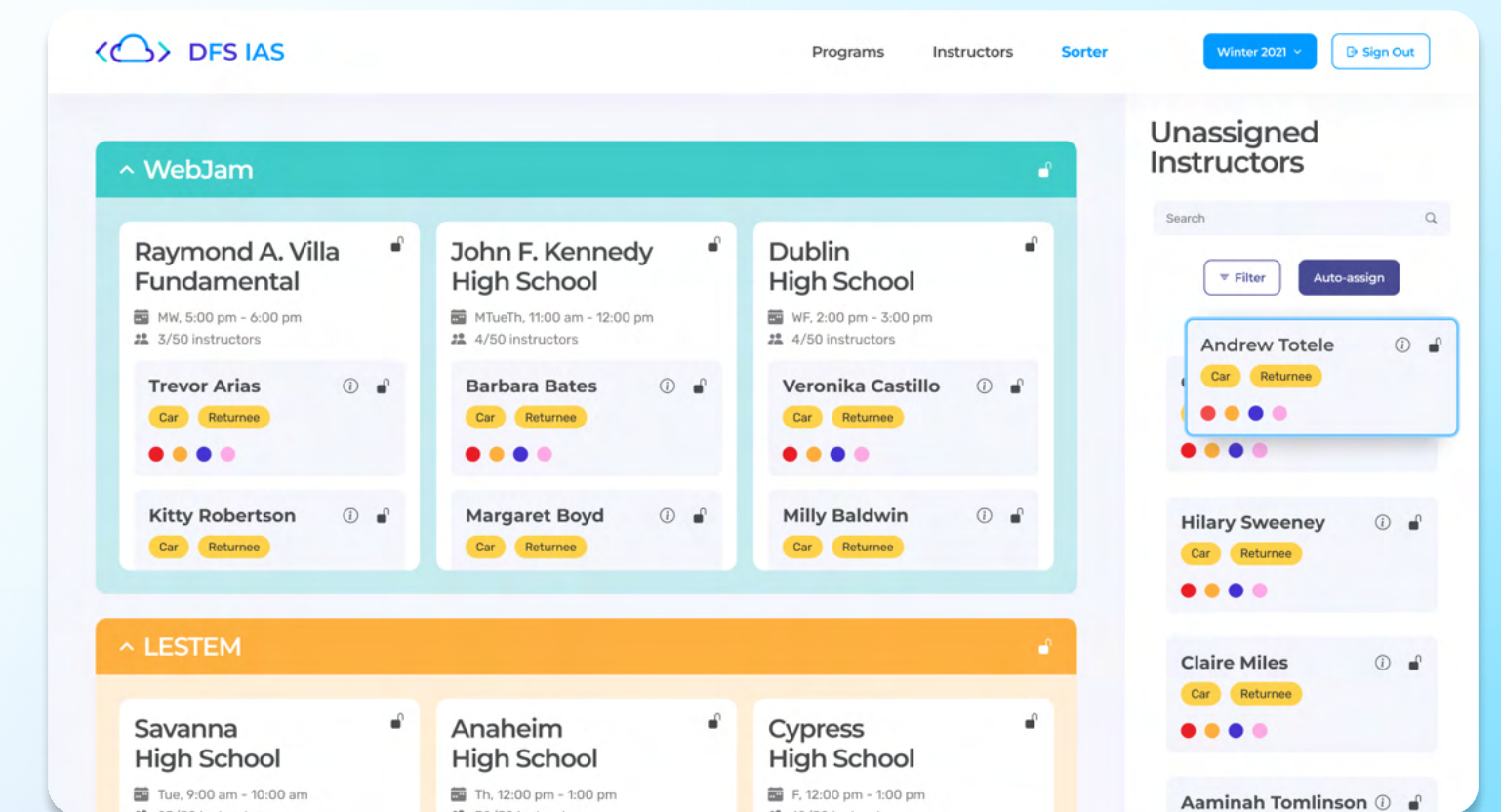




Case Study 2:

Instructor Assignment Sorter



Presented by Arjun Tyagi

<cloud> dreamsfor schools

Instructor Assignment Sorter

Introduction

Client: Dreams for Schools is a non-profit org that lead programs and initiatives contributing to educating youth about STEM/Comp Sci.

- Working with various school districts in SoCal to offer STEM courses
- Hires high school and university students as instructors
- In the process of scaling up their operations to the rest of California

Background: HCI capstone project, 2 quarters long

- Team of 4 designers with a background in development
- First quarter was focused on design exploration and refinement
- Second quarter was for development and updating designs



Project Overview

Problem Statement: As DFS works to scale up operations, they needed an integrated system to manage academic seasons, programs, partners, and instructors.

- DFS enrolls instructors from nearby high school and universities.
- Instructors provide location, availability, experience, and course preferences.
- Manually assign instructors based on their preferences, availability, and distance.
- Expecting significant increase in time/complexity as the org scales up across California

Our Design Proccess

Product Definition

- Stakeholder Interviews
- Personas & User Journey



Product Research

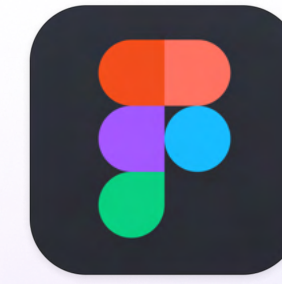
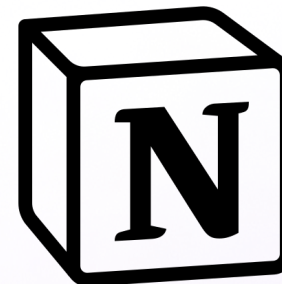
- Requirements Analysis
- Competitive analysis



Design Cycle

- Ideation & Sketching
- Wireframes -> Validation
- Creating a design system
- High Fidelity -> Validation

Tools Used:



Product Definition: Stakeholder Interviews

Goal: Understand the end to end process for managing instructors, partners, and programs.

- Background
- Overall responsibilities
- Day to day tasks
- What are their core needs?
- Pain points?
- How can we streamline their entire proccess?



Audrey Auyang



Nithin Jilla

Product Definition: Personas

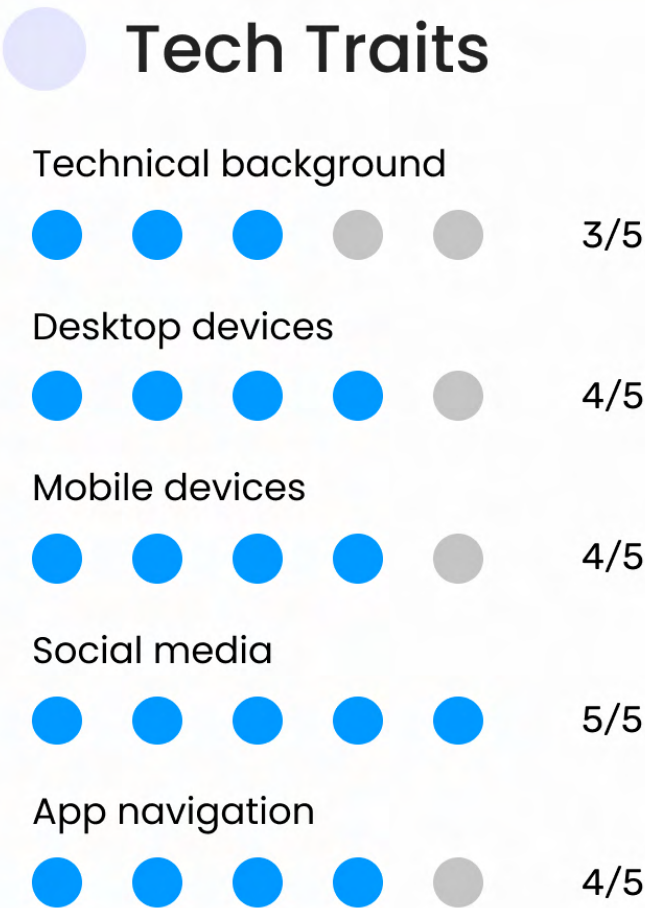


Audrey Auyang
Programs Director at Dreams For Schools

Age	29 years old
Education	B.S. in Business Management
Location	Hacienda Heights, California
Tech Literacy	High

Busy Social Organized

- Biography**
- UCI alum
 - Passionate about social outreach, event planning, and teaching students about tech.
 - Currently works as the programs director at Dreams For Schools
 - Plans course offerings and assigns instructors to teach programs.



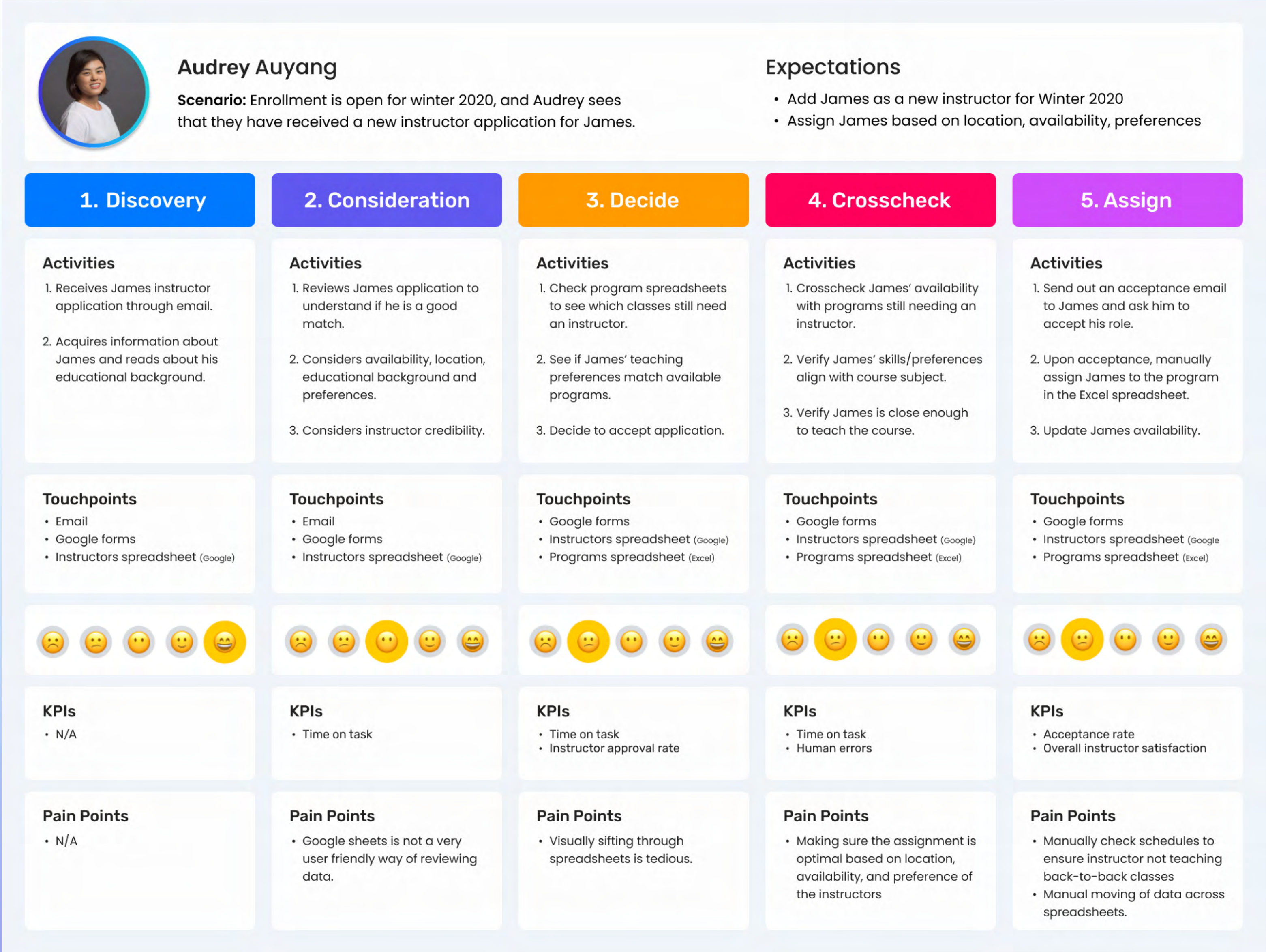
- Frustrations**
- Time consuming
 - Cross referencing spreadsheets is prone to error
 - Lots of data redundancy
 - Do not have a one-stop program to view all data about programs, partners and instructors.
 - Not scalable

“ I’m currently using multiple spreadsheets to complete this process, so having something that is fool-proof and fast to use would be a game changer. ”

- Core Needs**
- Streamlined process for keeping track of program, partner, and instructor data.
 - Auto-assign based on preference, location, and availability.
 - Intuitive way to manually assign instructors
 - Should integrate well with existing onboarding process and seasons data

- Motivations**
- Eager to migrate to a less tedious process.
 - Auto assign functionality will save huge amounts of time.
 - Will allow her to focus her efforts towards org expansion/business goals

Product Definition: User Journey



06

Product Research: Requirements & Userflows

Meeting Notes + Add a view

- Meeting #1
- Meeting #2
- Meeting #3
- Meeting #4
- Meeting #5
- Meeting #6
- Meeting #7
- + New

Sprint Reports

- Sprint: #1
- Sprint: #2
- Sprint: #3
- Sprint: #4
- Sprint: #5
- Copy of Sprint: #5
- + New

Design Documentations

- Requirement Document
- Technical Debt
- Heuristics Evaluation
- API Documentation 1
- SQL Relational Schema / ER Diagram
- Old Setup Documentation
- Super Sequence Diagram

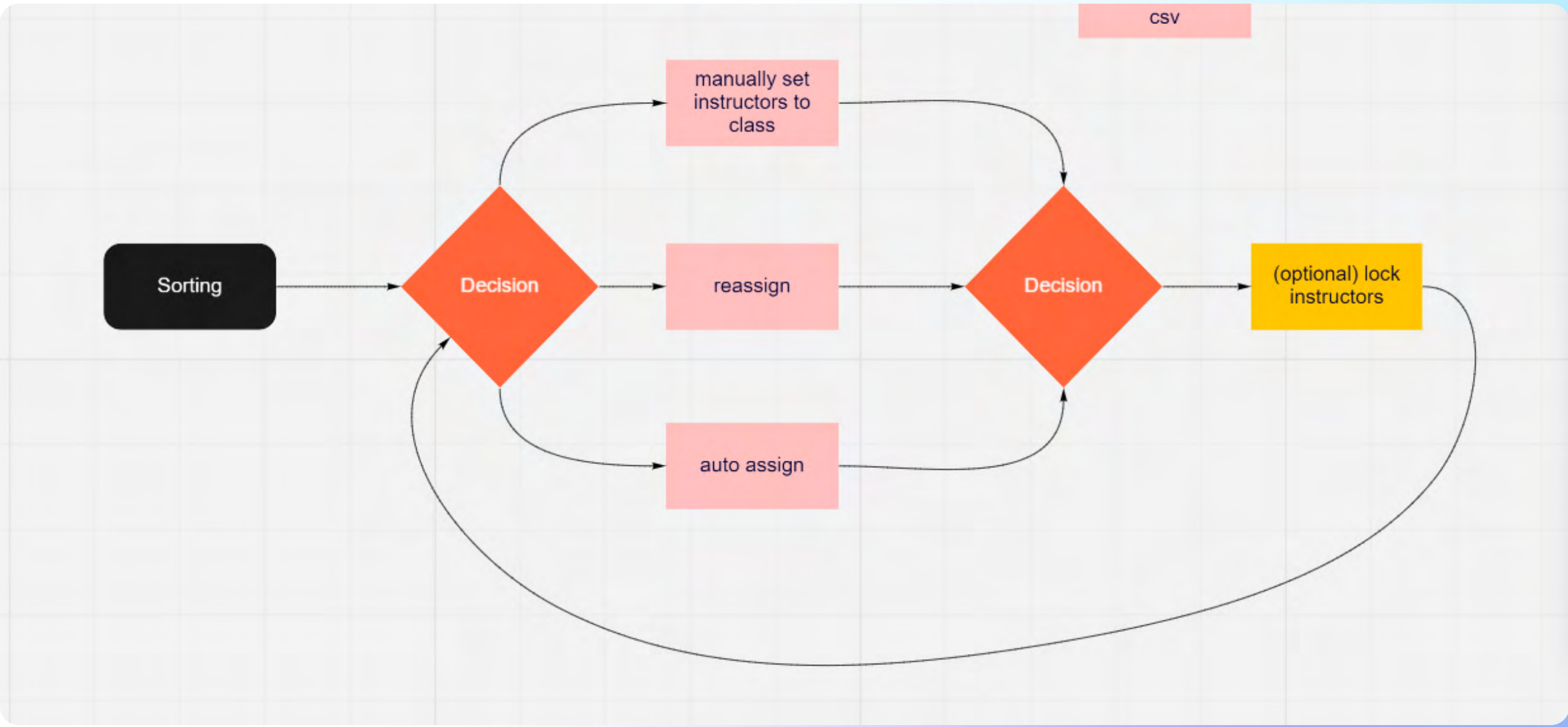
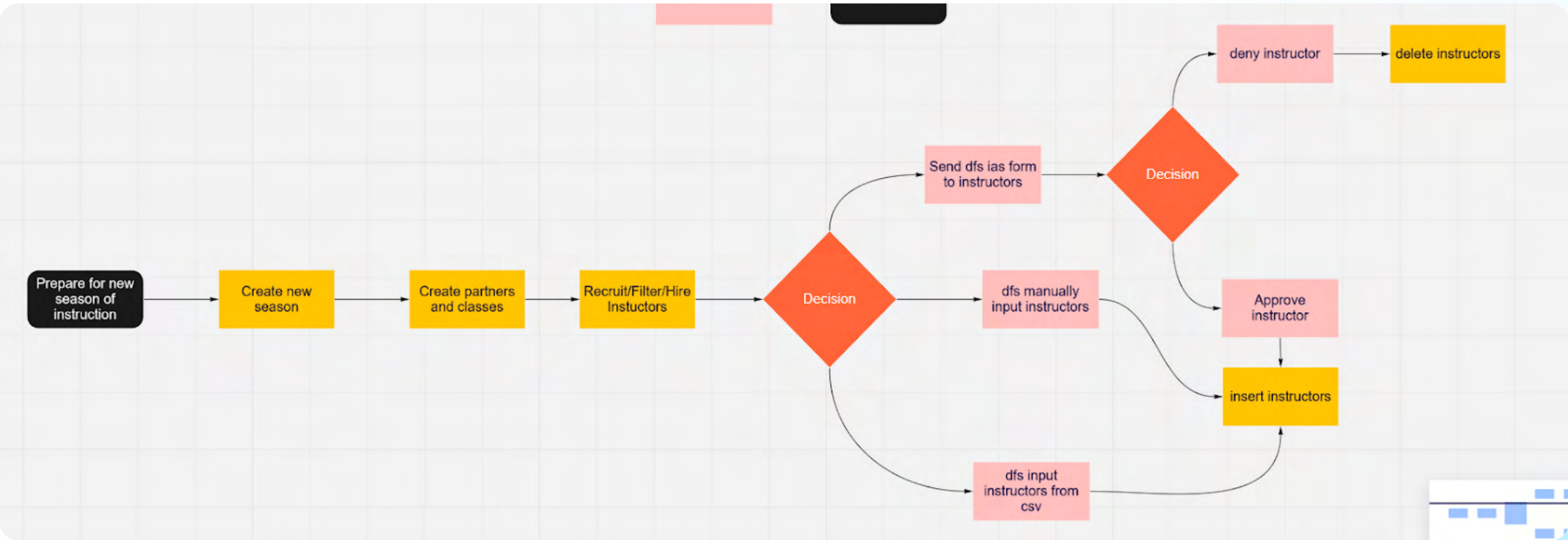
DFS Instructor Assignment Sorter (IAS) Requirements

Instructor Dashboard Tab:

- Should have list of all instructors
- Be able to edit instructor info
- Be able to add instructors and delete instructors
- Ability to sort (using columns)

Instructor Inputs:

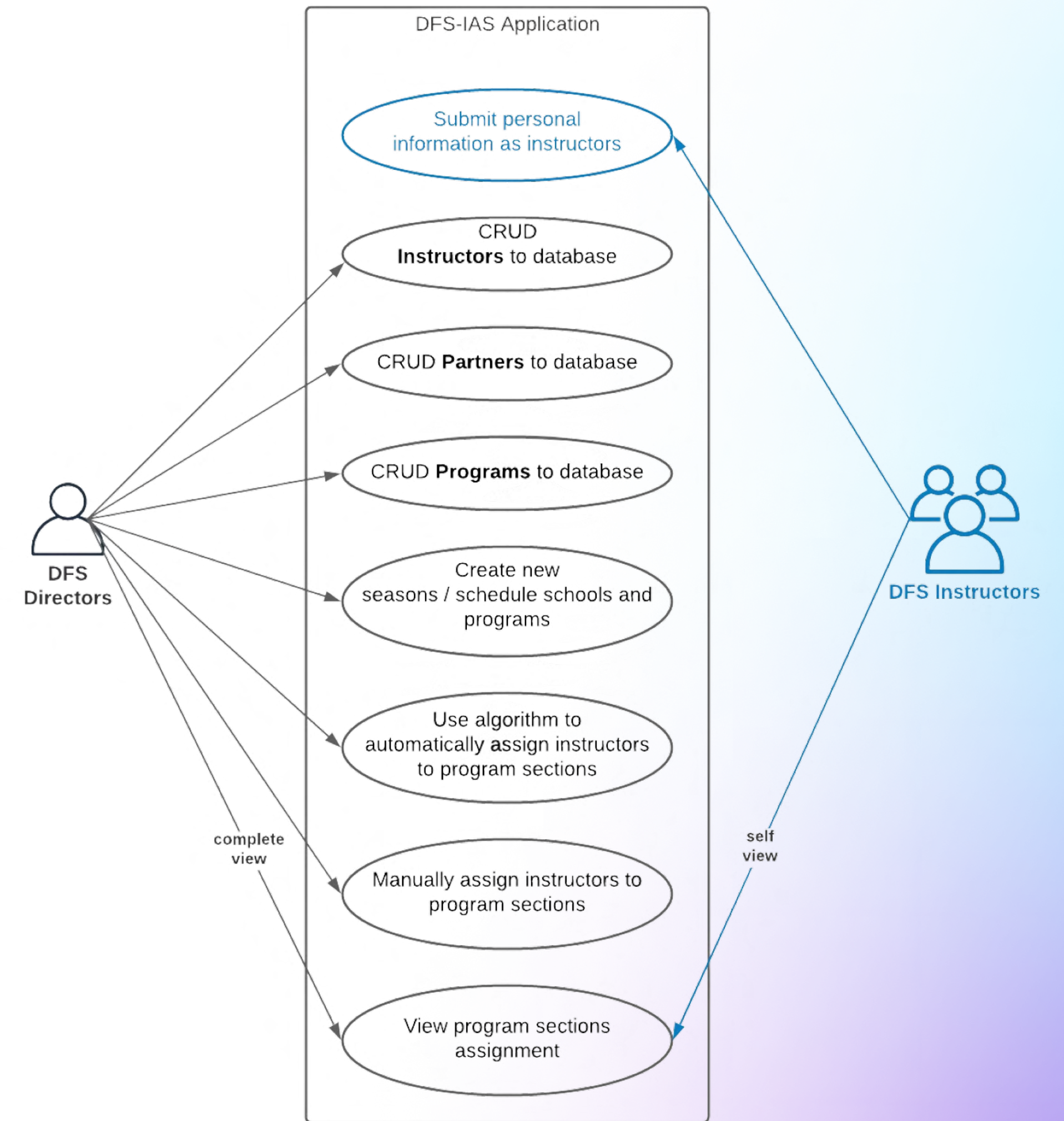
- Name
- Gender
- Year of the instructor in school (if applicable)
- Major
- University
- Region
 - Orange County
 - Riverside
 - Los Angeles
- Starting location (where they live)
- Schedule of days available
 - windows of time available
 - Timezone
- Car - Yes or no
 - minimum 1 for each group
 - if possible, more evenly spread out with 2
- Returning Instructor - Yes or no
 - being able to distinguish between new vs returner
- Shirt Size
- Program they're teaching
 - Let's Explore STEM
 - Coding Games with Scratch
 - Engineering for Kids
 - Web Development - WebJam
 - Mobile App Development - AppJam+
- Preferred Ranking of Programs
- Languages Spoken (check boxes for all fluent)
 - Spanish
 - Vietnamese
 - Mandarin



Product Research: Key Requirements

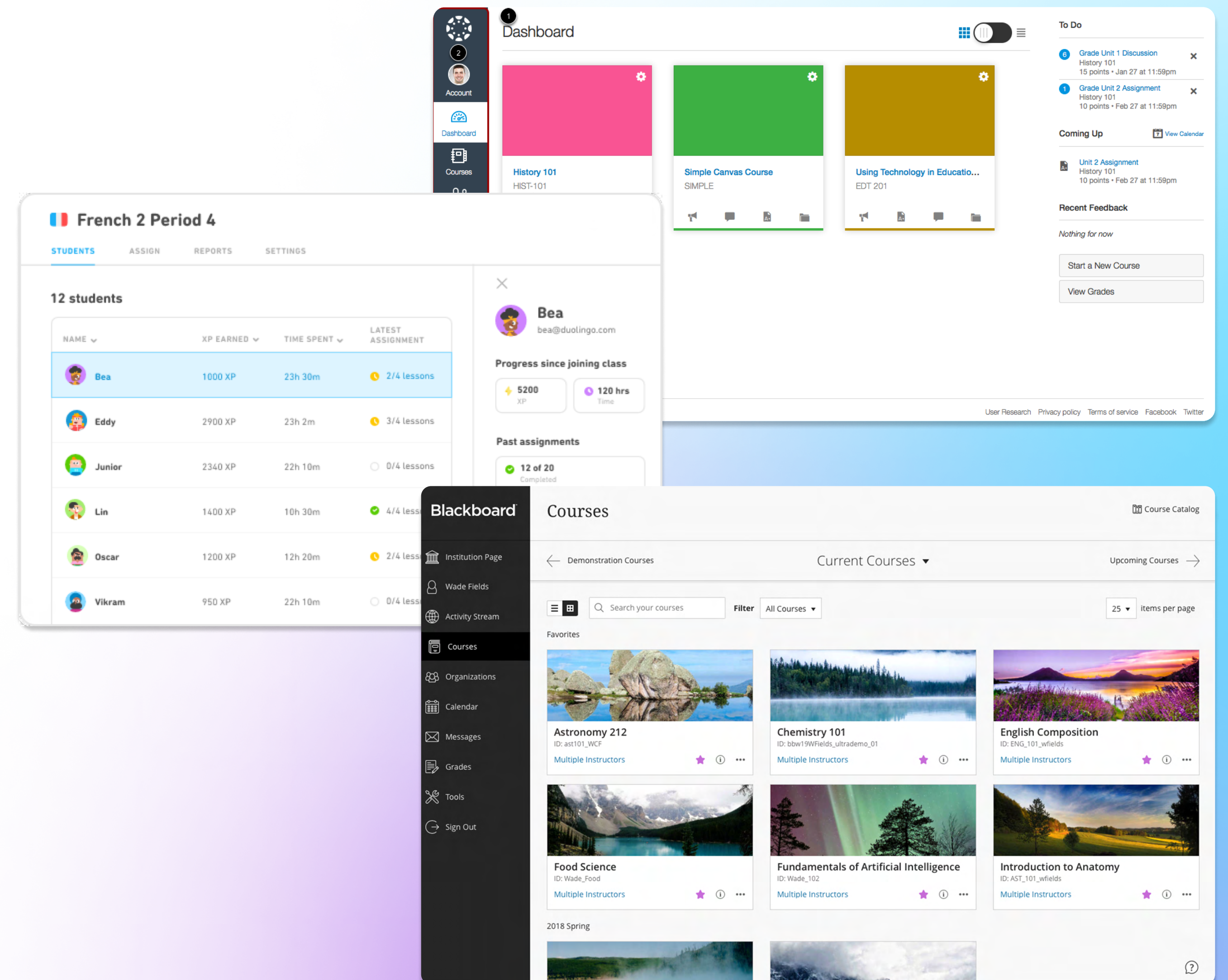
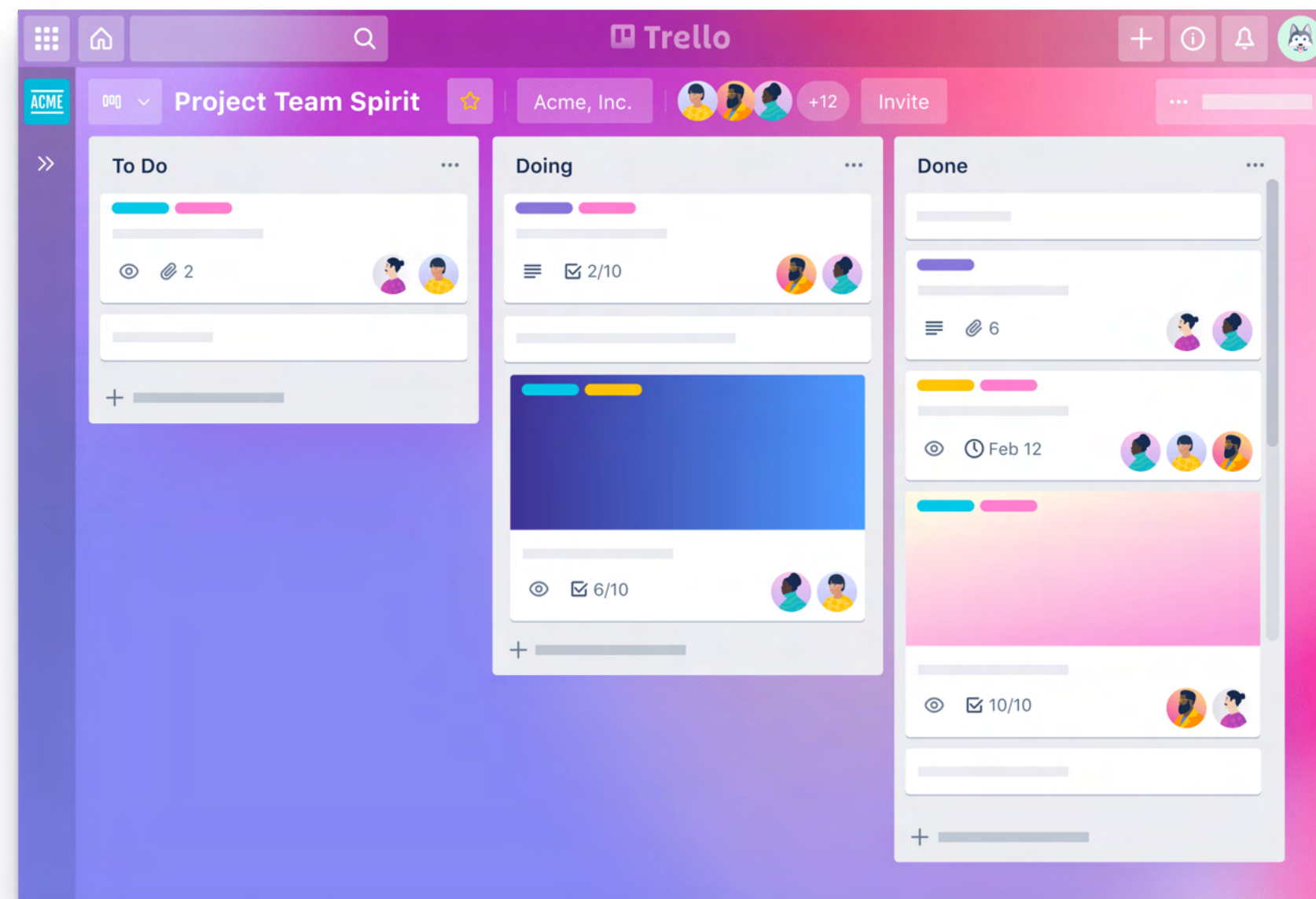
A web based system for managing programs, partners, and instructors.

- Automated instructor assignments
- Manual assignments via drag and drop.
- Ability to lock assignments in place and auto assign.
- Support CSV upload, manual entry, and self-onboarding links.
- Align with design language from their existing web portal.

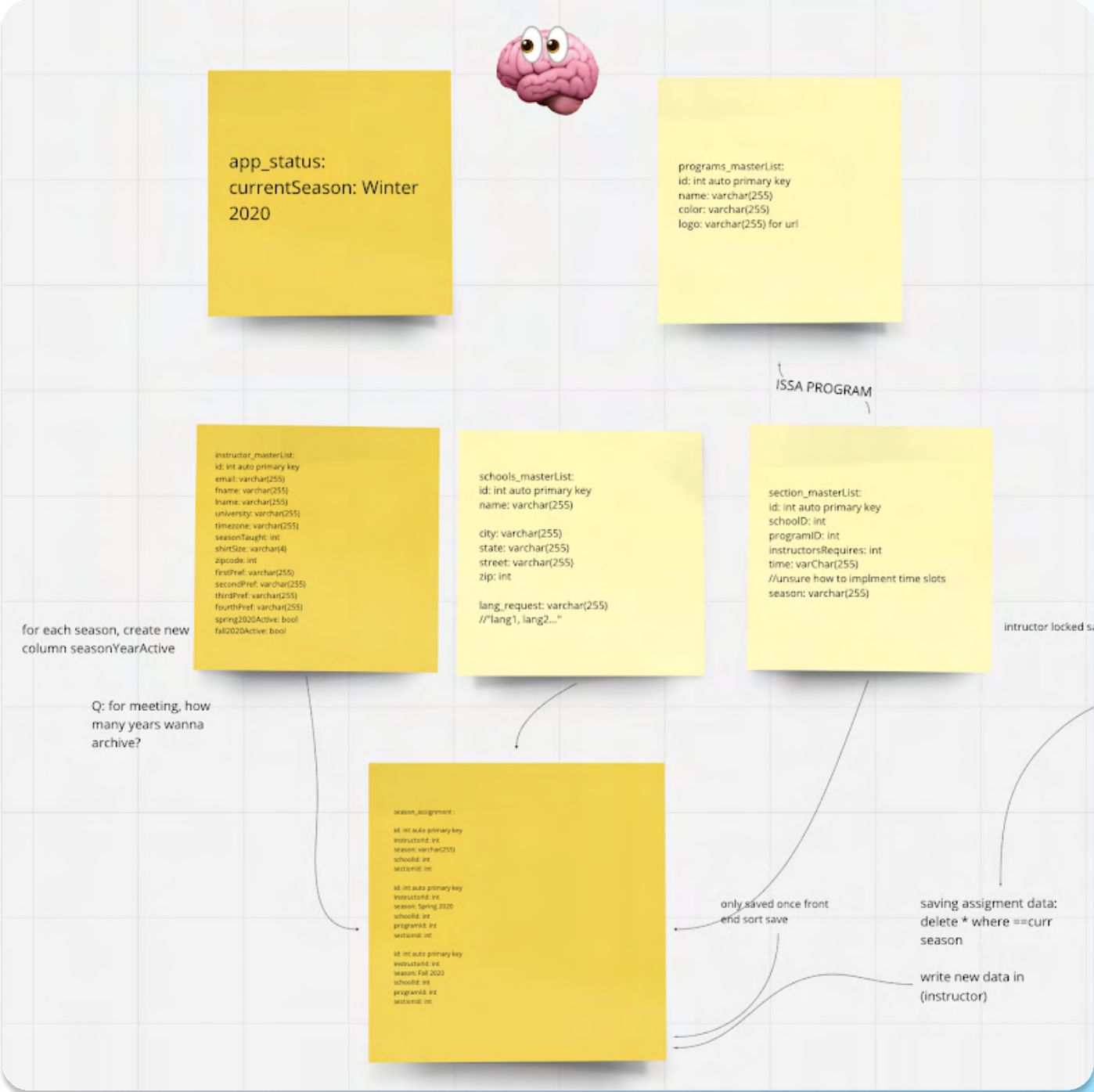
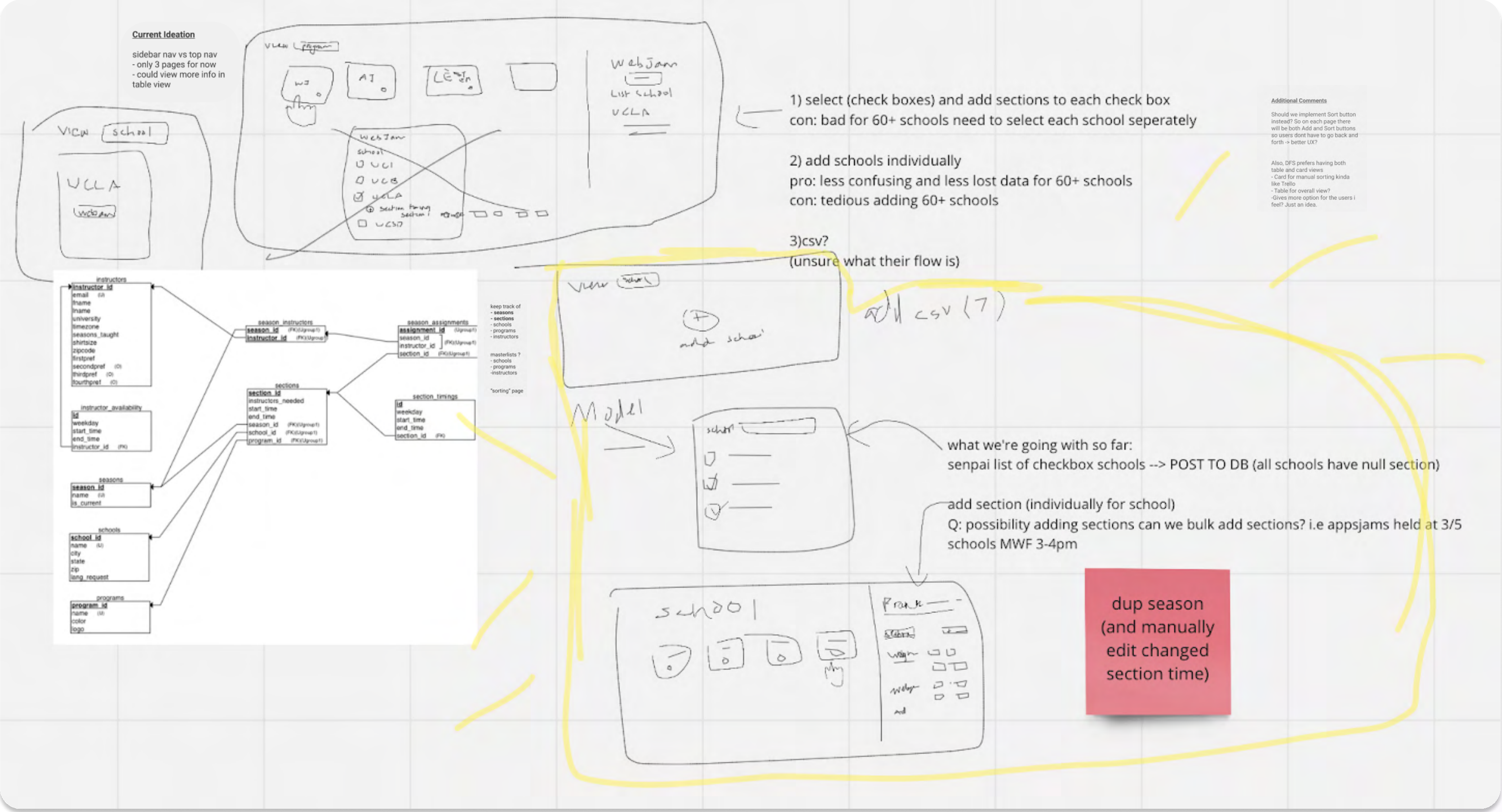


Product Research: Competitive Analysis

- Course management systems
- Learning dashboards like Duolingo
- Trello drag & drop cards

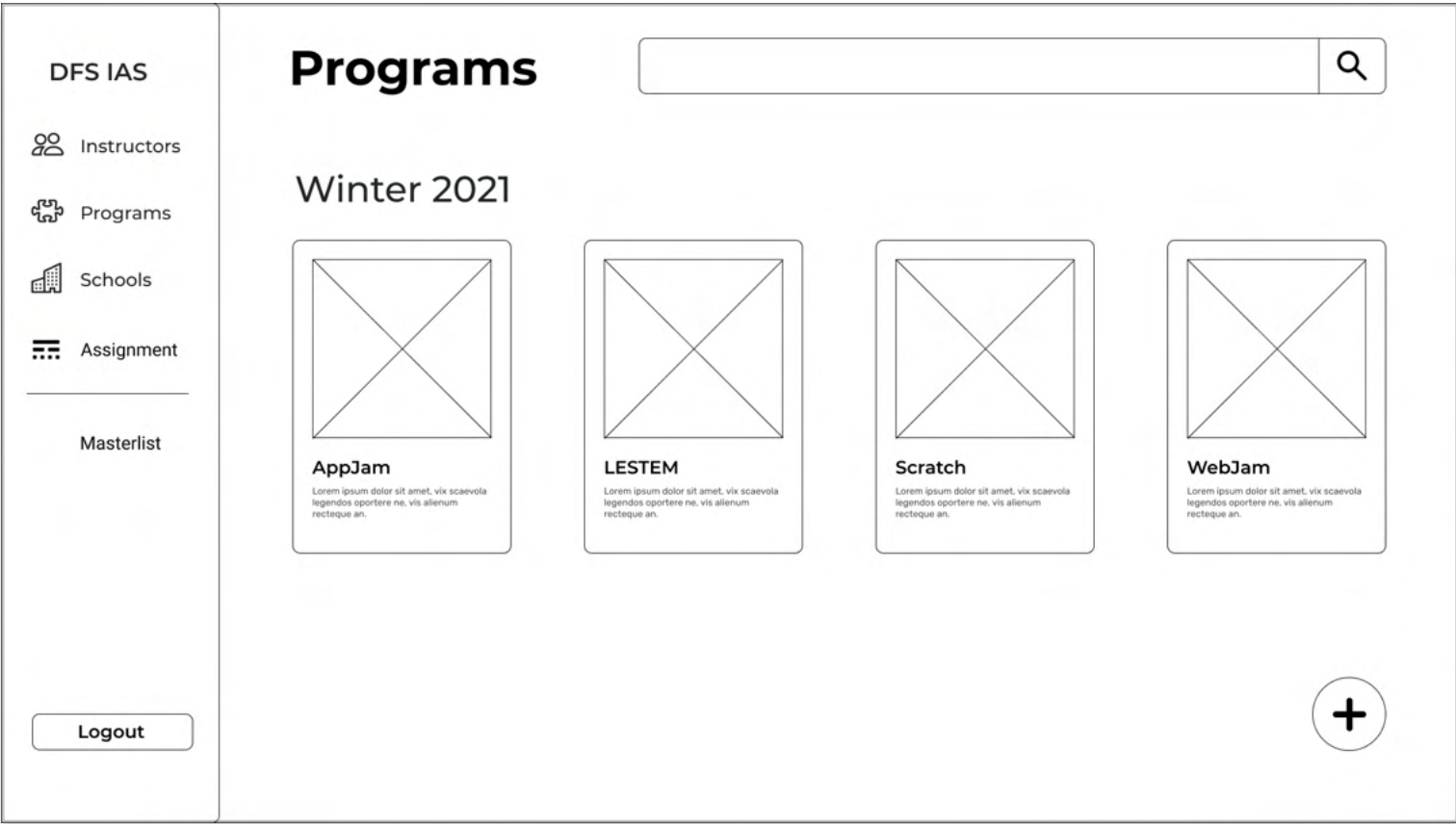
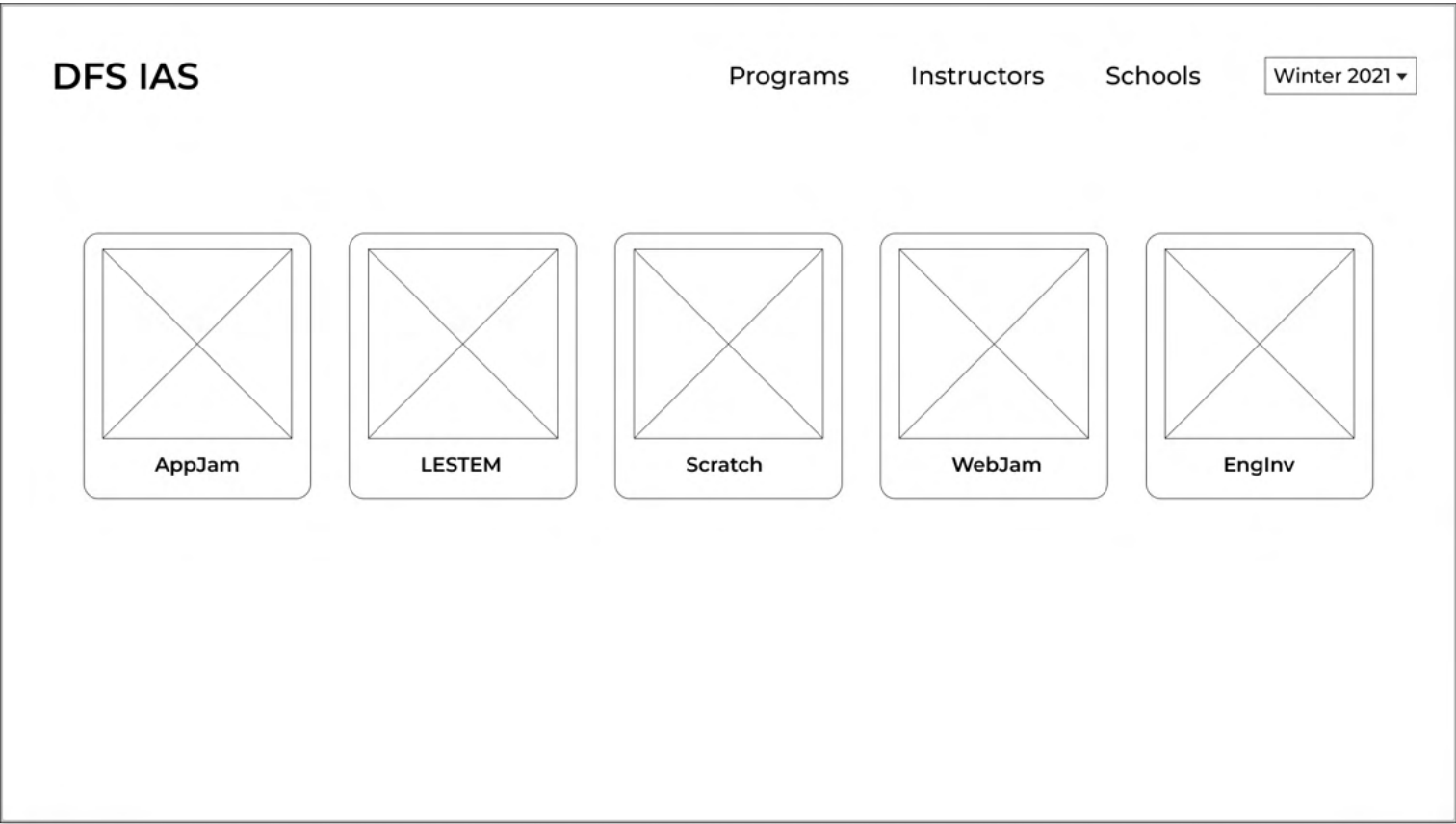


Design Cycle: Ideation & Sketching

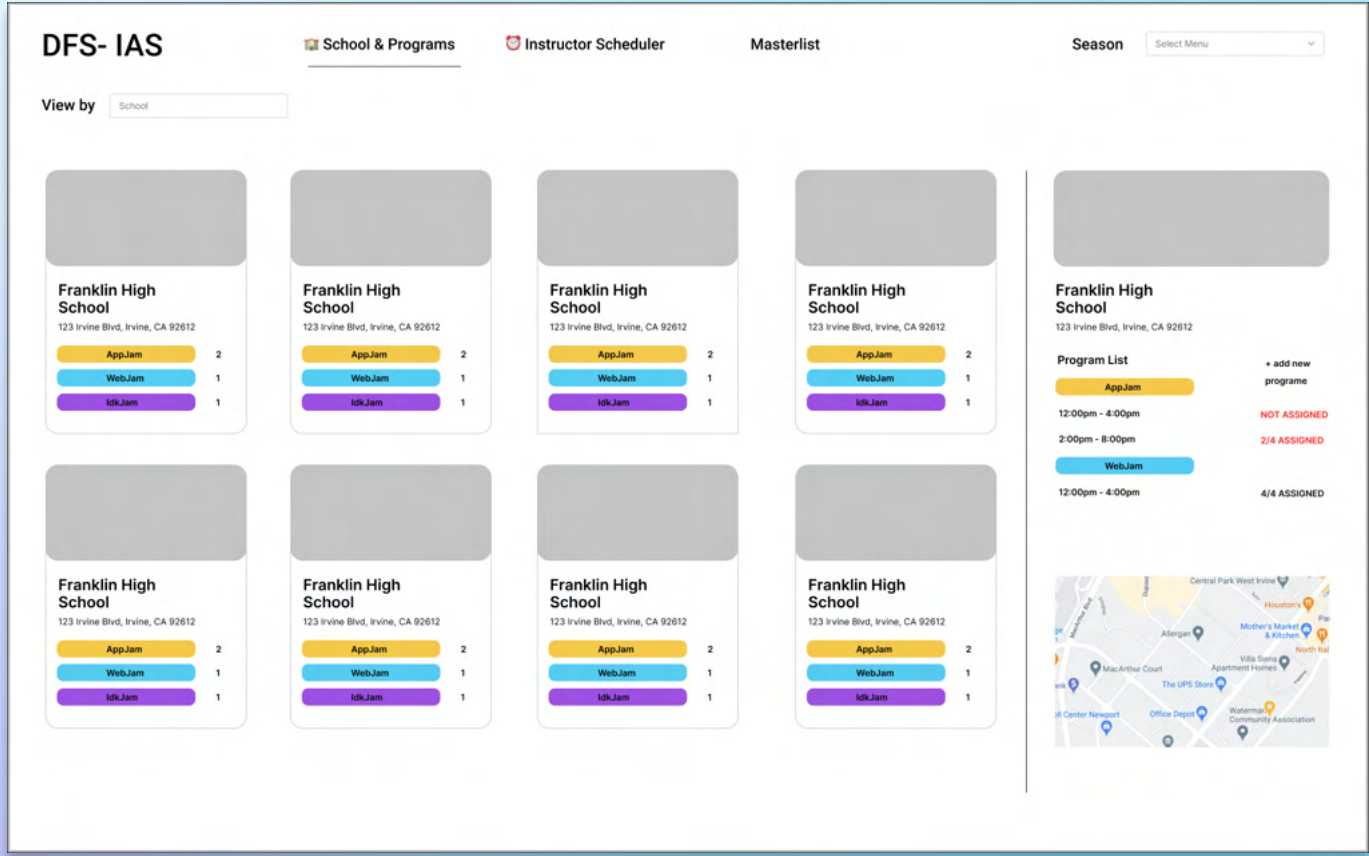
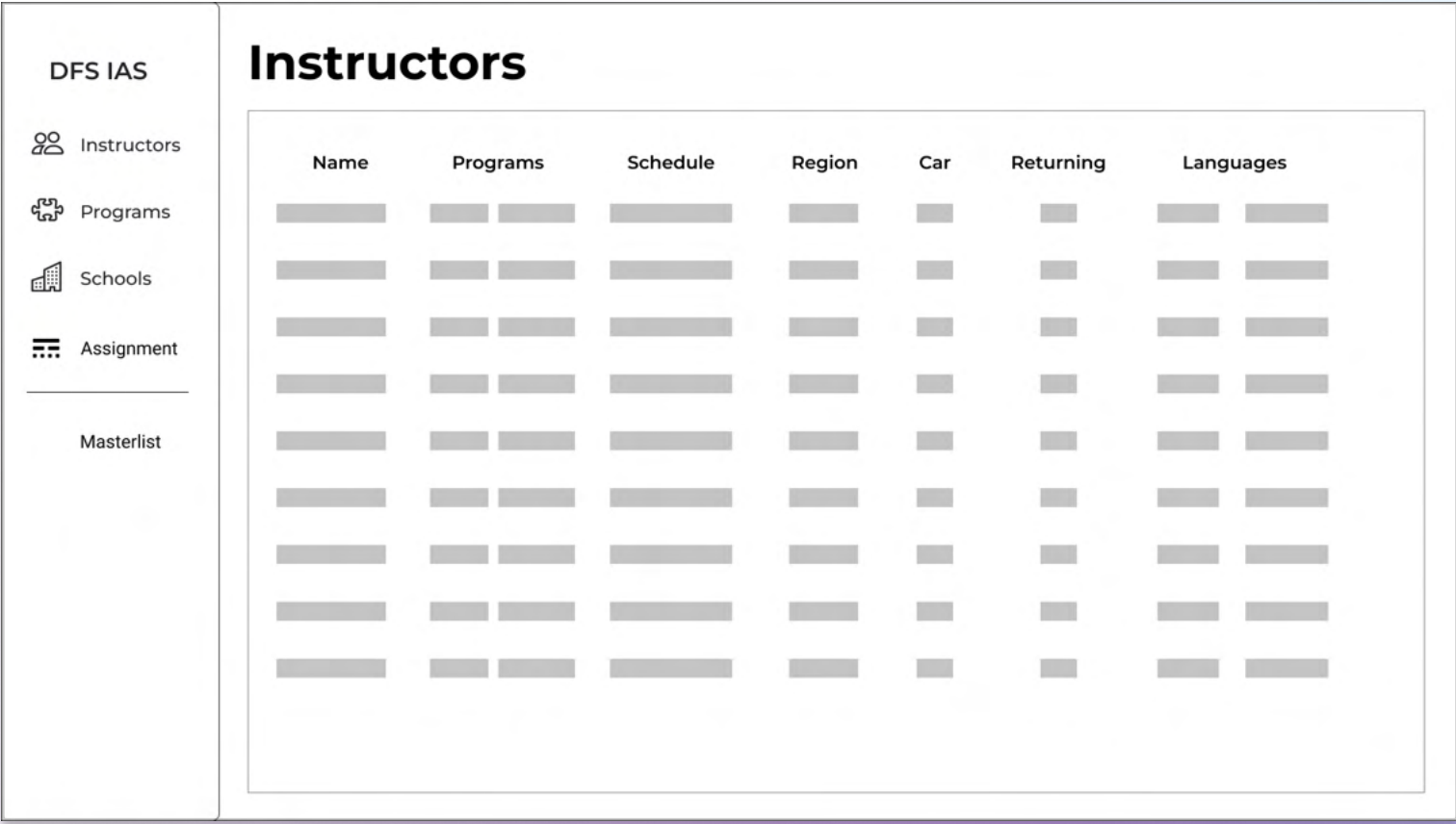
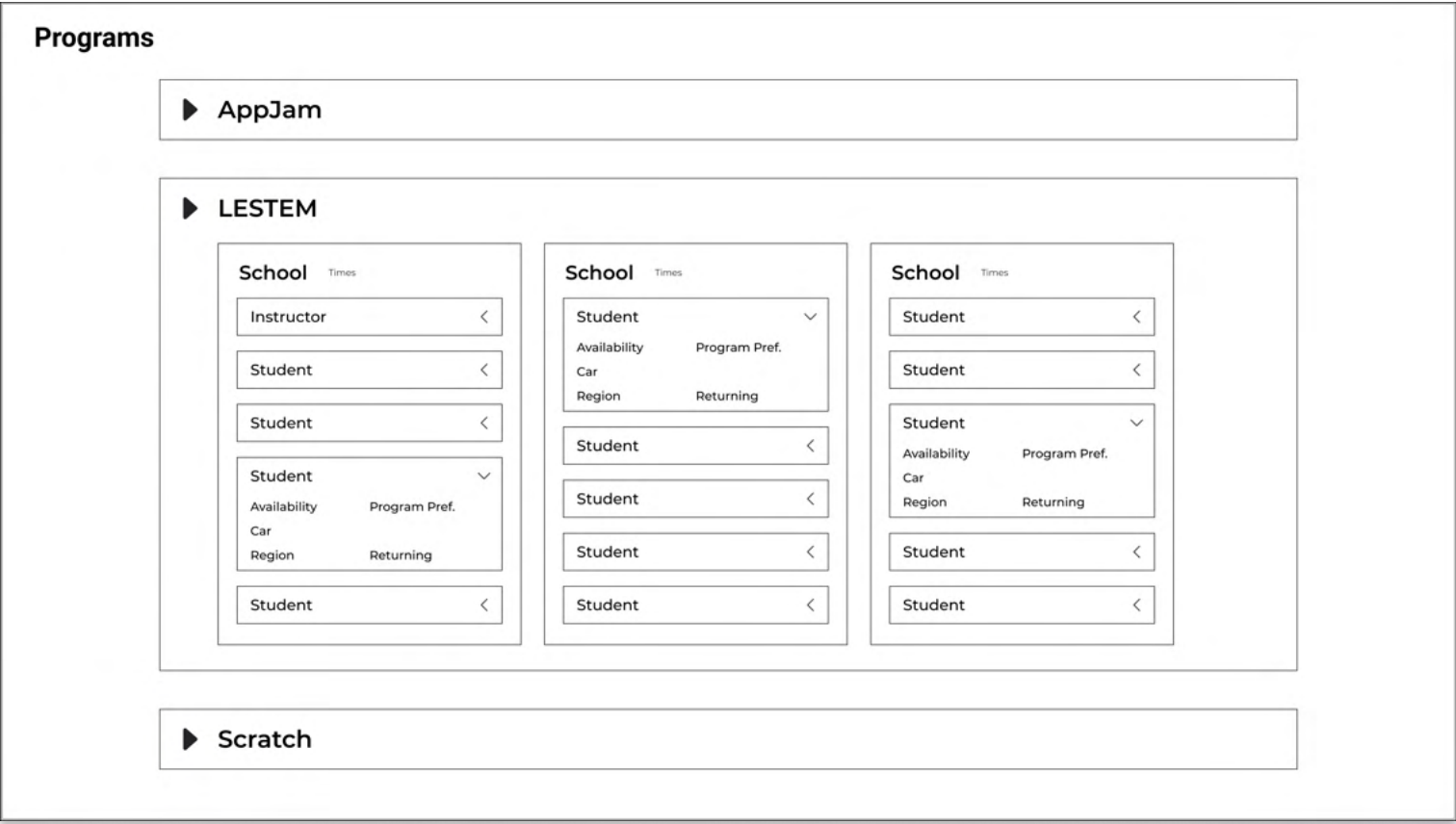
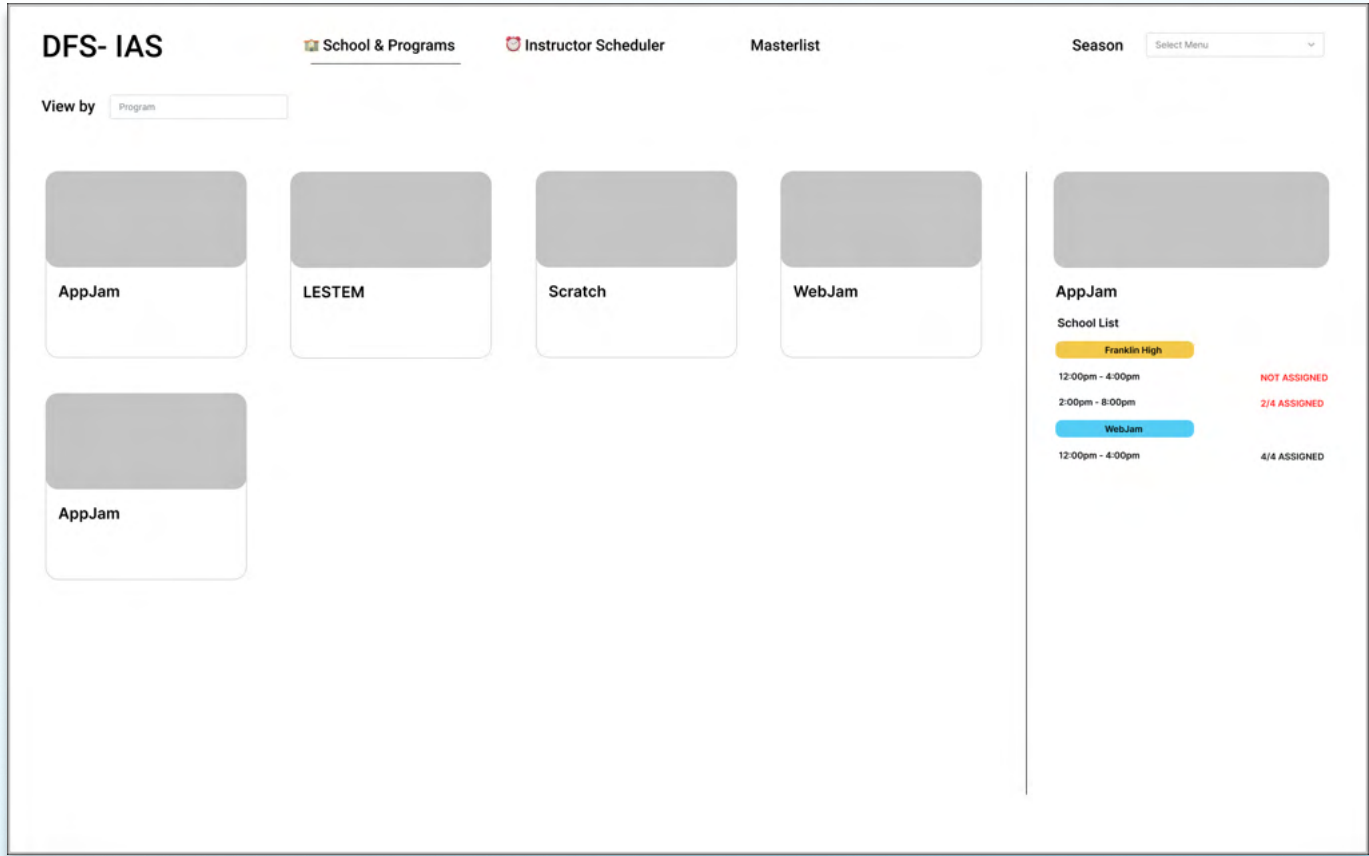


Design Cycle: Low Fidelity Wireframes

Iteration 1

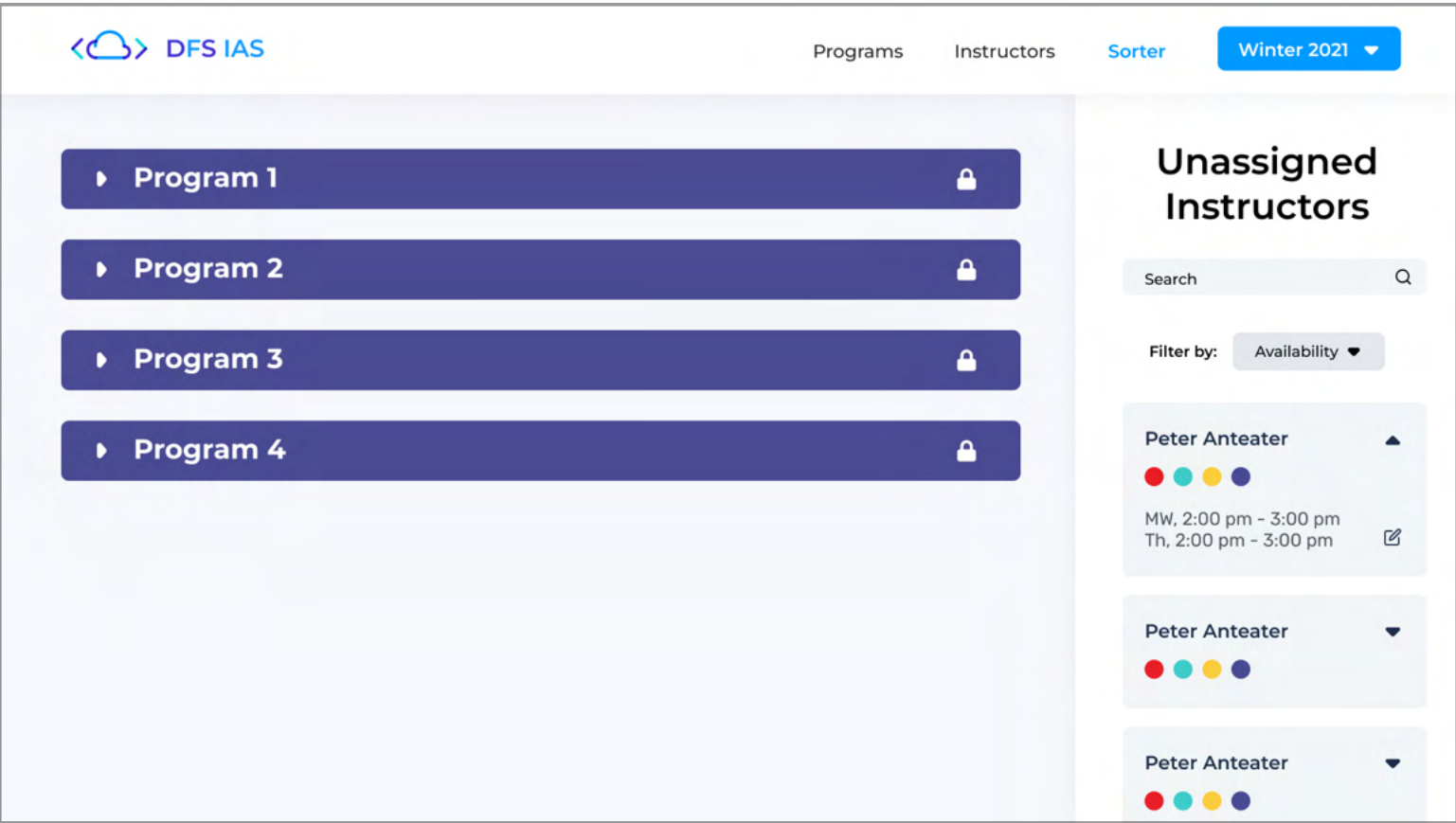
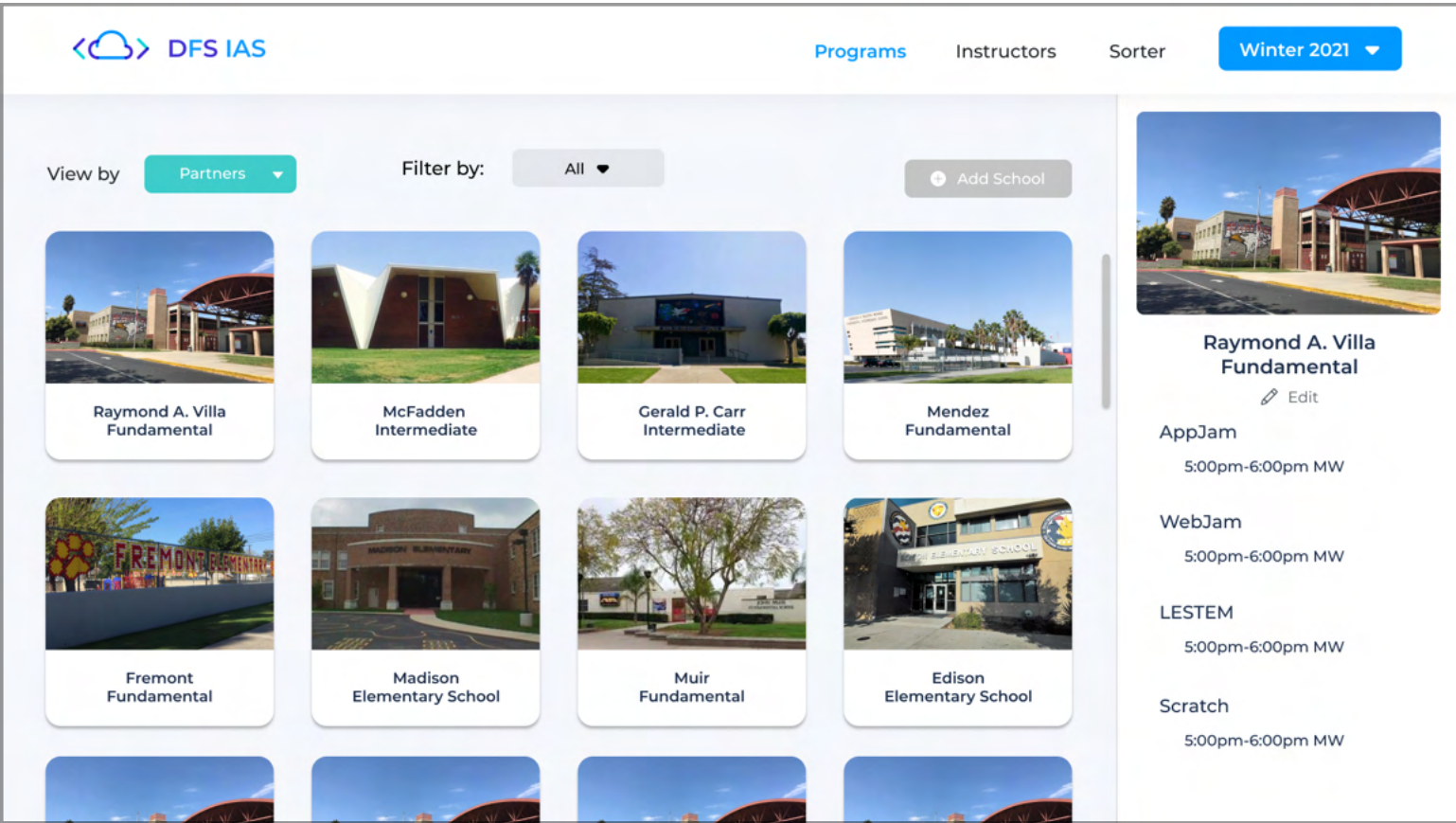
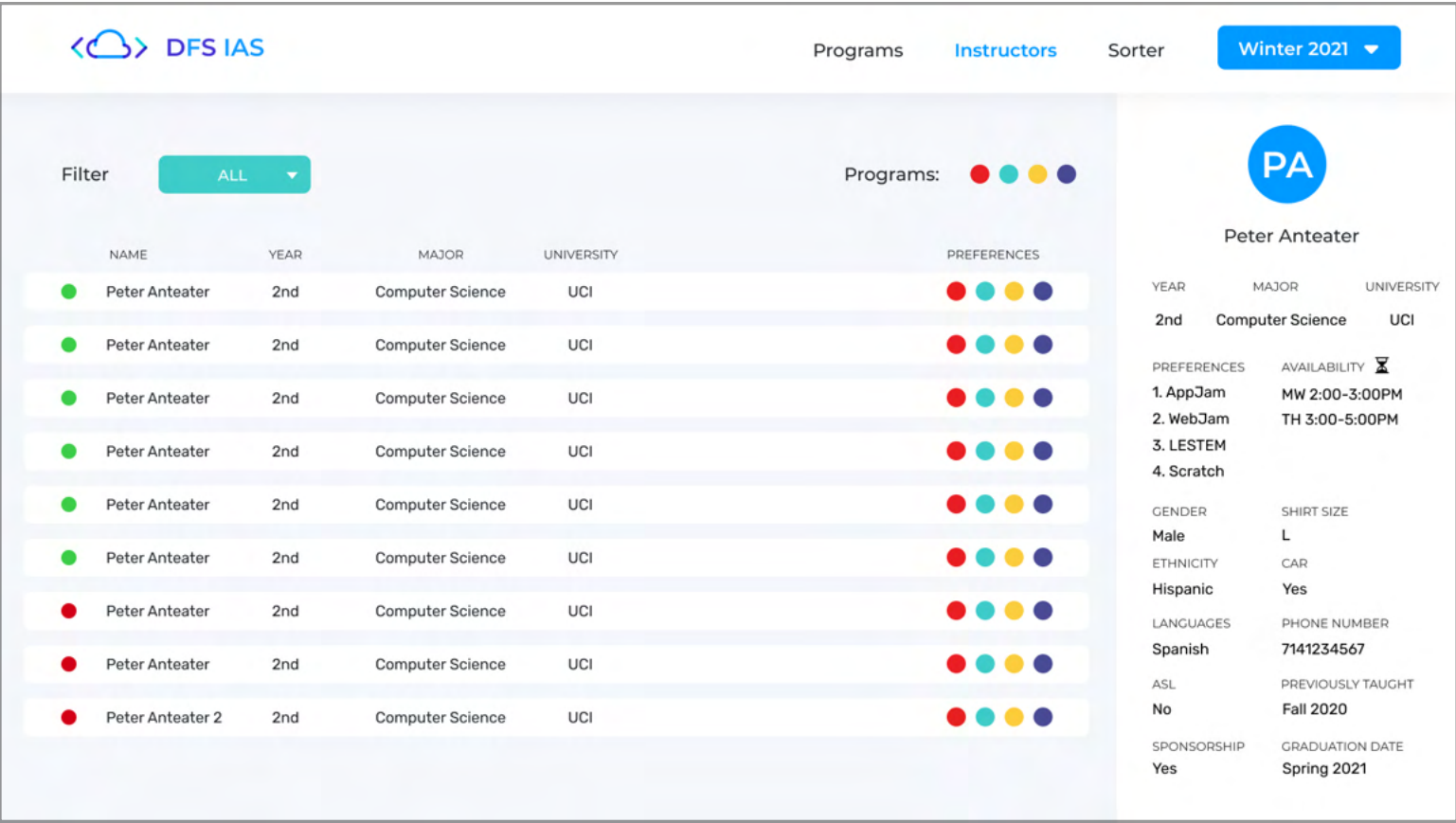
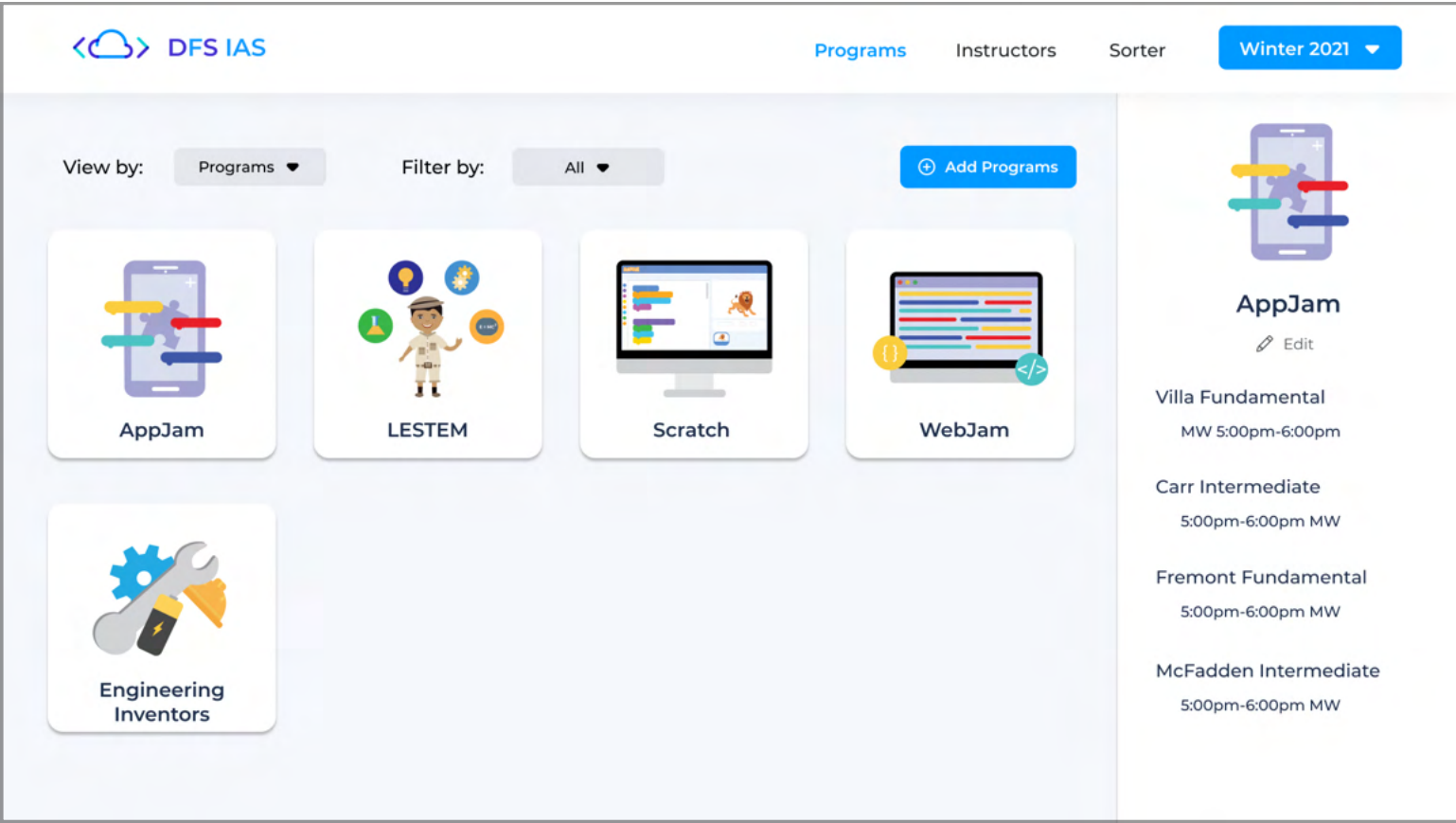


Iteration 2



Design Cycle: Mid Fidelity Wireframes

Iteration 3



Design Cycle: Creating a Design Systems

Atoms

Typography

Display 01

Medium

Display 01 Semi Bold

Display 01 Bold

Display 02

Medium

Display 02 Semi Bold

Display 02 Bold

Heading 01

Medium

Heading 01 (S) Medium

Heading 01 Semi Bold

Heading 01 Bold

Heading 01 (S) Bold

Heading 02

Medium

Heading 02 (S) Medium

Heading 02 Semi Bold

Heading 02 Bold

Heading 02 (S) Bold

Heading 03

Medium

Heading 03 (S) Medium

Heading 03 Semi Bold

Heading 03 Bold

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Heading 04

Medium

Heading 04 (S) Medium

Heading 04 Semi Bold

Heading 04 Bold

Heading 04 (S) Bold

Heading 05

Medium

Heading 05 (S) Medium

Heading 05 Semi Bold

Heading 05 Bold

Heading 05 (S) Bold

Subheading 01

Medium

It is a long established fact that a reader will be distracted by the readable content.

It is a long established fact that a reader will be distracted by the readable content.

It is a long established fact that a reader will be distracted by the readable content.

Subheading 02

Medium

It is a long established fact that a reader will be distracted by the readable content.

It is a long established fact that a reader will be distracted by the readable content.

It is a long established fact that a reader will be distracted by the readable content.

Subheading 03

Medium

Colors

Neutral

Primary

Secondary

Success

Warning

Error

Shades

Tertiary

Logos and Pictures

Dreams for Schools

Lottie Files

Static Files

Components

Cards

Side Bar Cards

Program and Partner Cards

Atoms

Icons

Small

Medium

Large

Extra Large

Microcopy

Buttons

Primary CTA

Small

Regular

Large

Secondary CTA

Small

Regular

Large

Ghost CTA

Small

Regular

Modals

Input Form

Modals

Microcopy

Modals

Add New System

Add Existing Program/Partner

Add Existing Program/Partner

Add Existing Program/Partner

New Program

Add New Program

Add New Program

Add New Program

Add New Partner

Add New Partner

Add New Partner

Add New Partner

Add Instructor

Add Instructor

Add Instructor

Add Instructor

Upload Instructor File

Instructor Lookup

Instructor Lookup

Instructor Lookup

Instructor Lookup

Add Instructor Manually

Add Instructor Manually

Add Instructor Manually

Add Instructor Manually

Add Instructor Manually

Add Instructor Confirmation

Add Instructor Confirmation

Add Instructor Confirmation

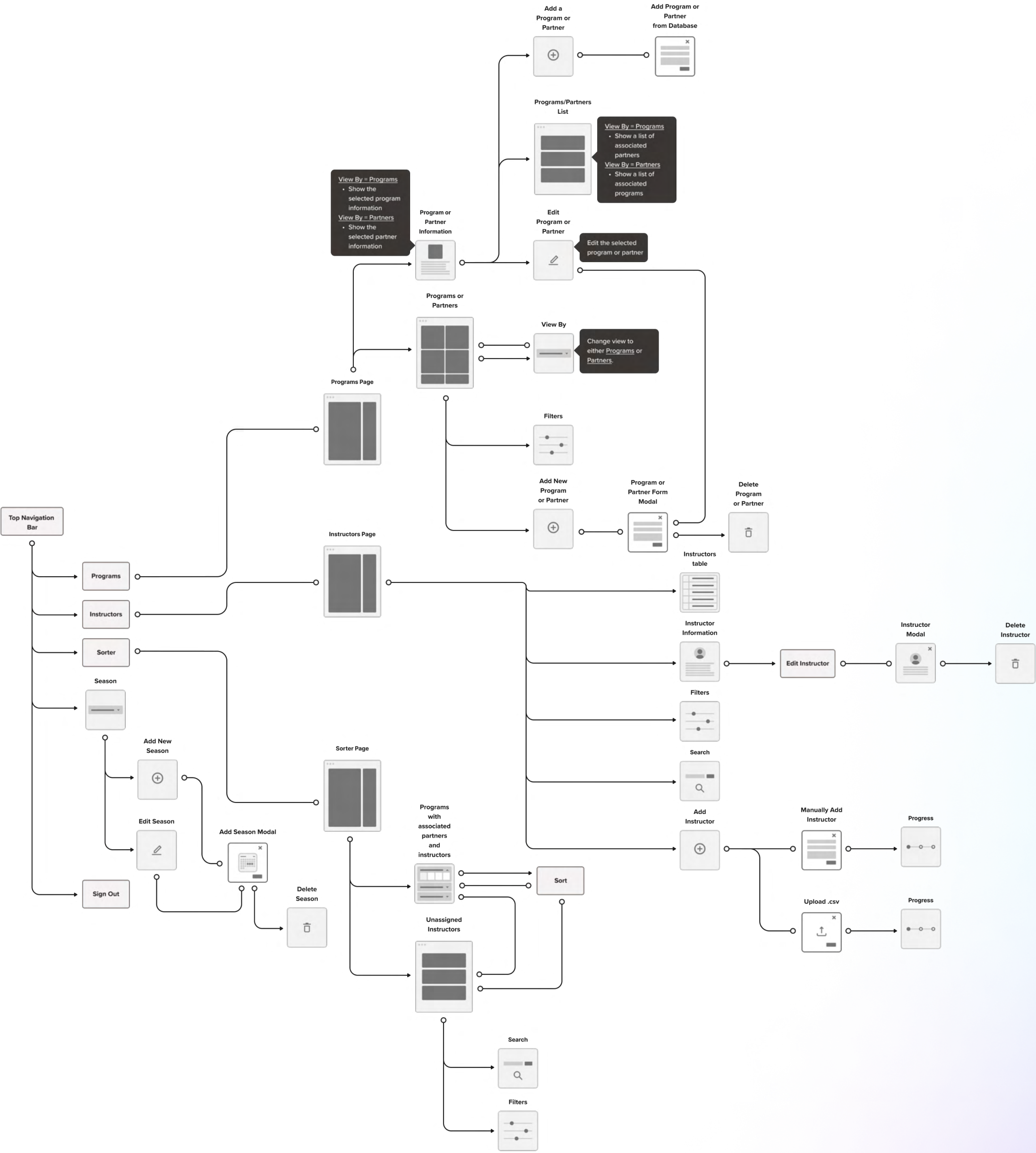
Add Instructor Confirmation

Add Instructor Confirmation

 DFS IAS

13

Design Cycle: Sitemap



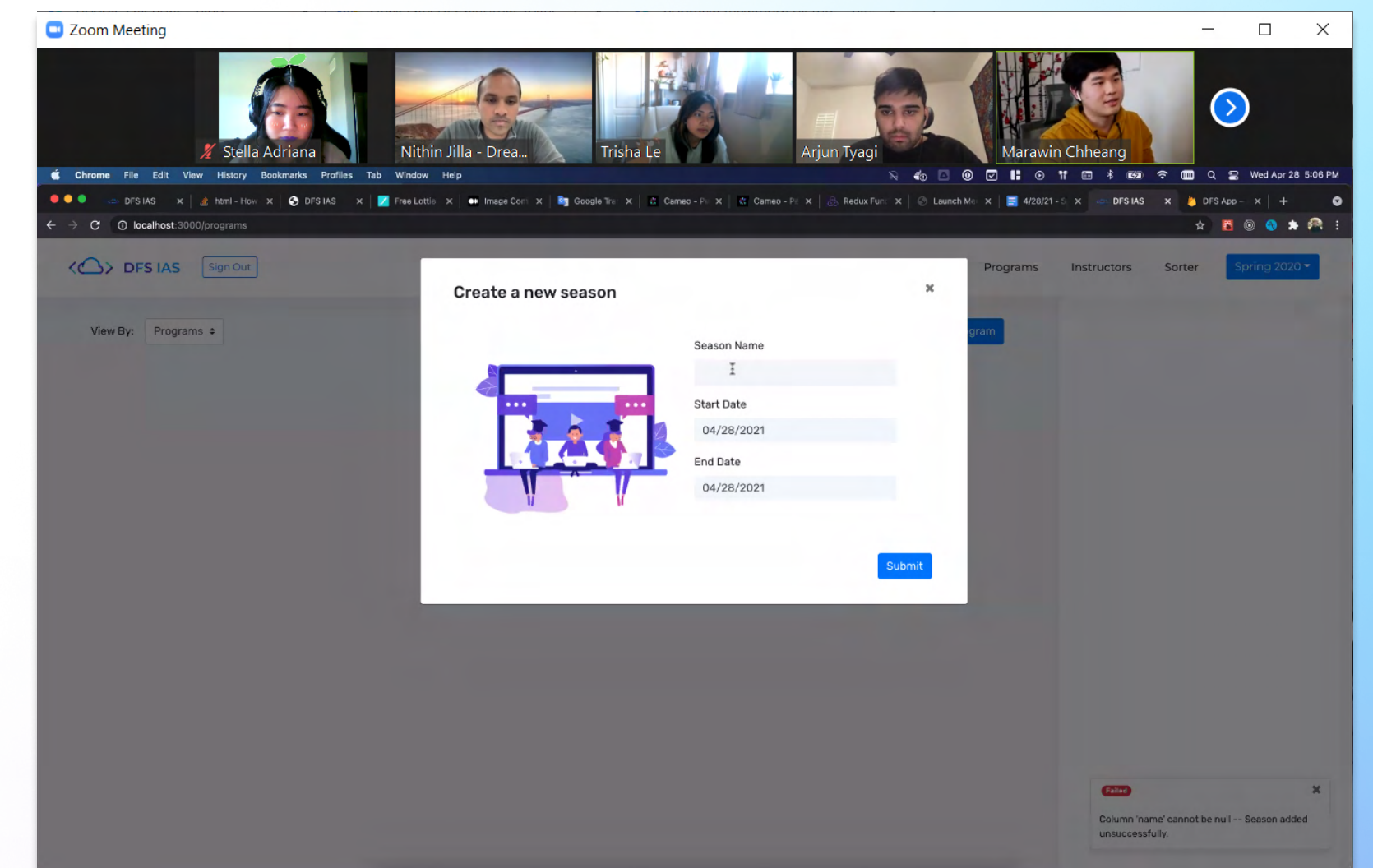
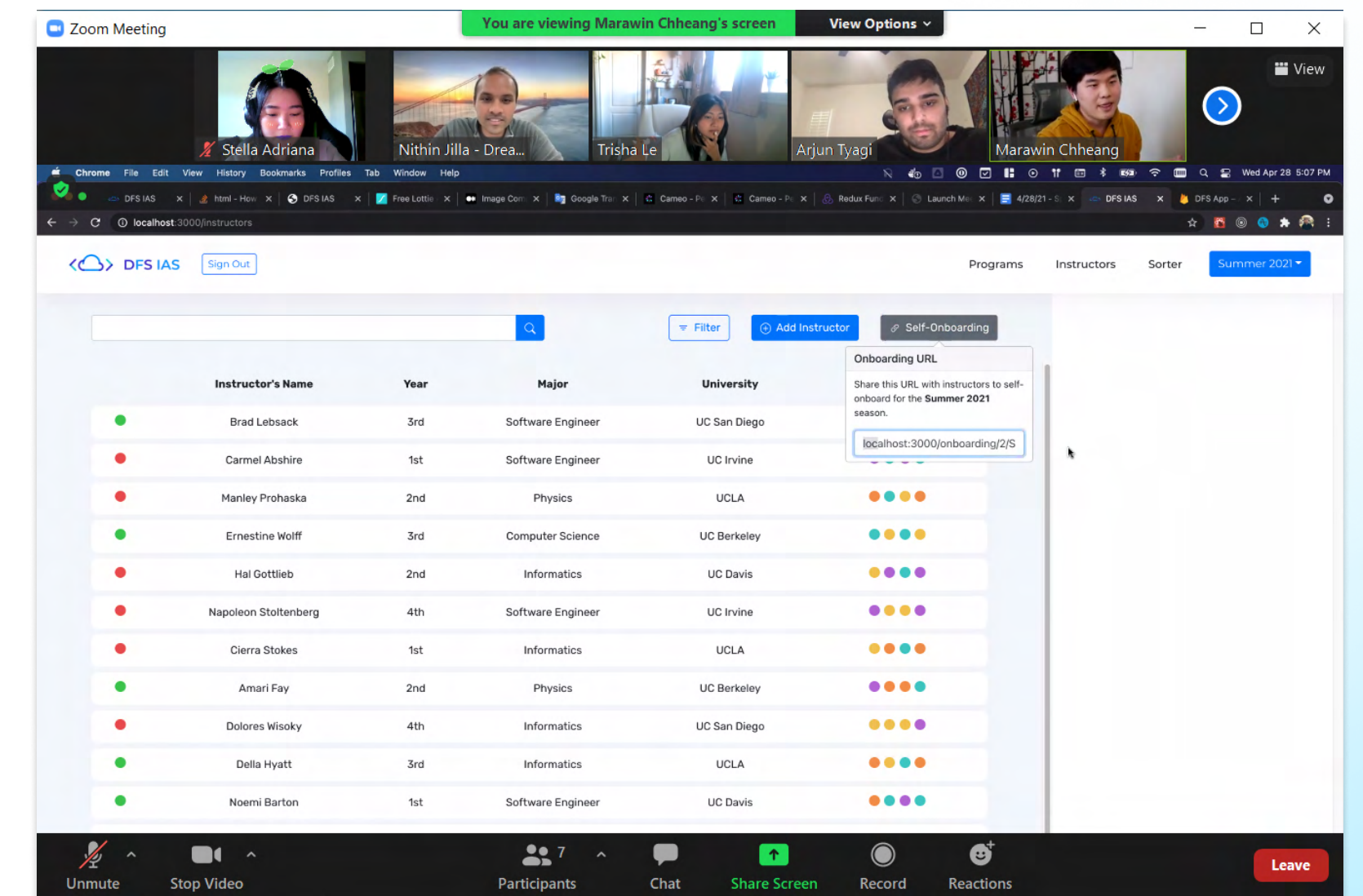
Design Cycle: Validation

Moderated remote usability testing:

- Participants: Stakeholders/ Program Directors
- Completed once per design iteration
- Cognitive walkthrough for setup and assignment flows.
- Collected insights and feedback about interaction pain points

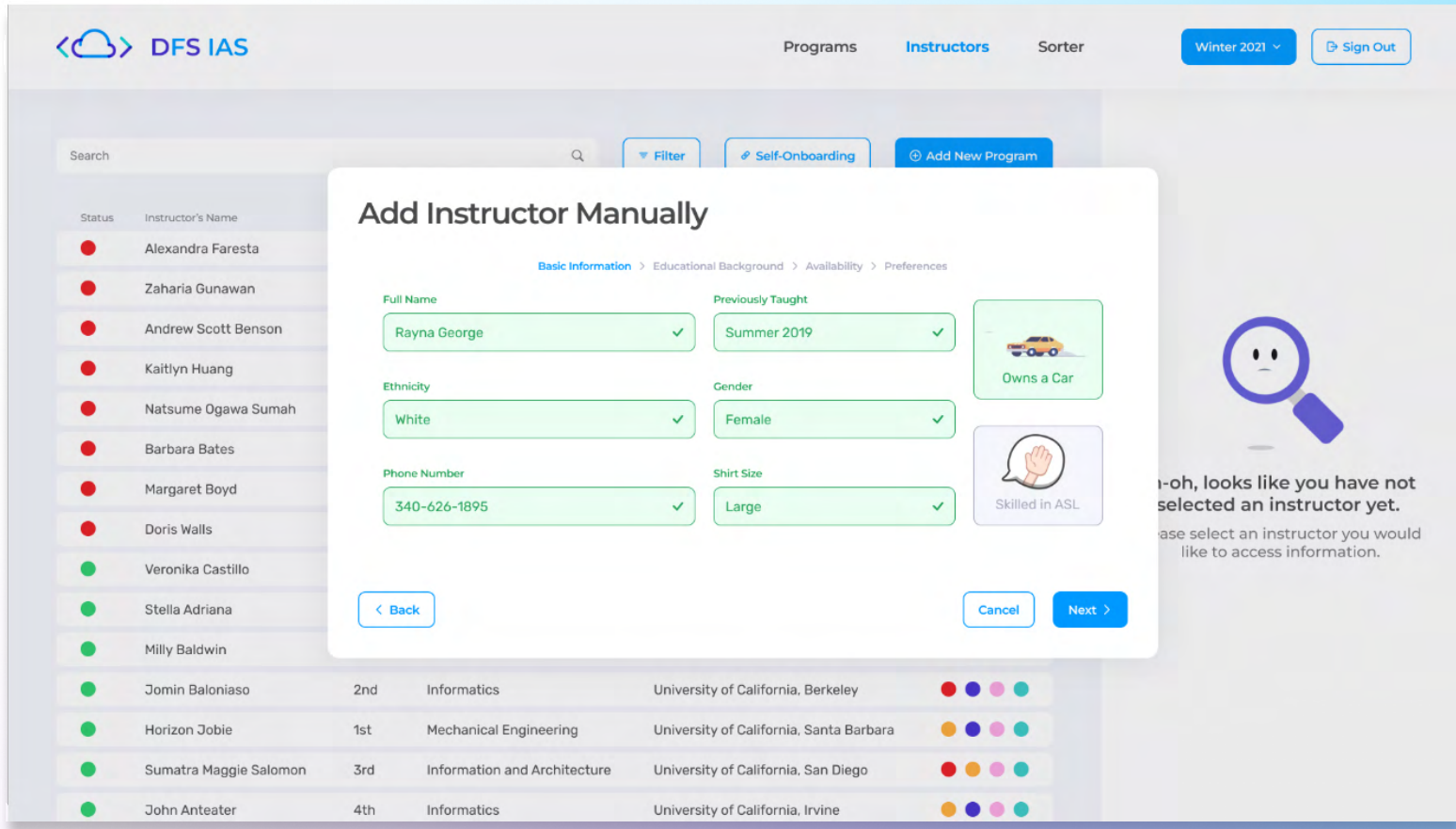
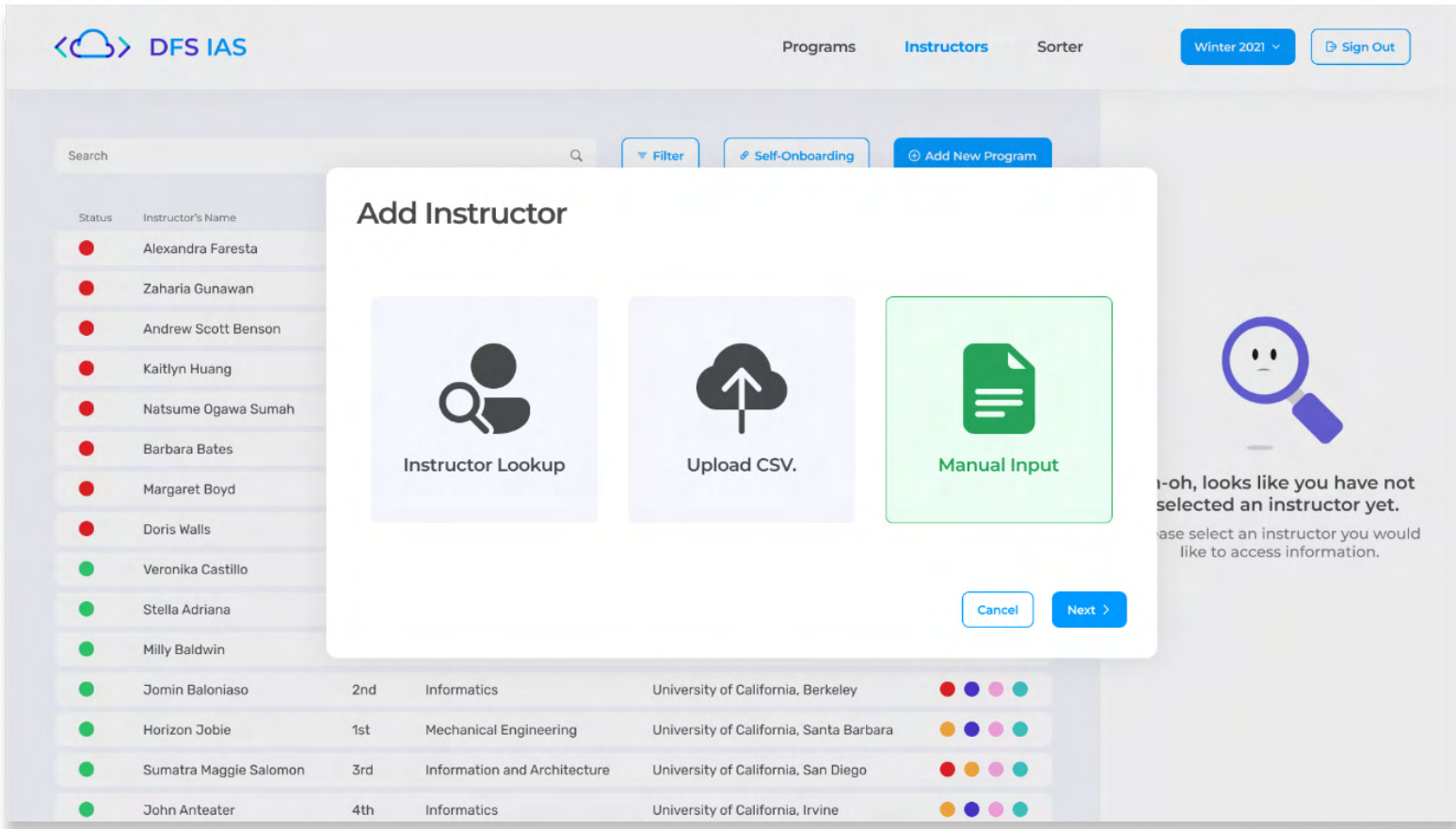
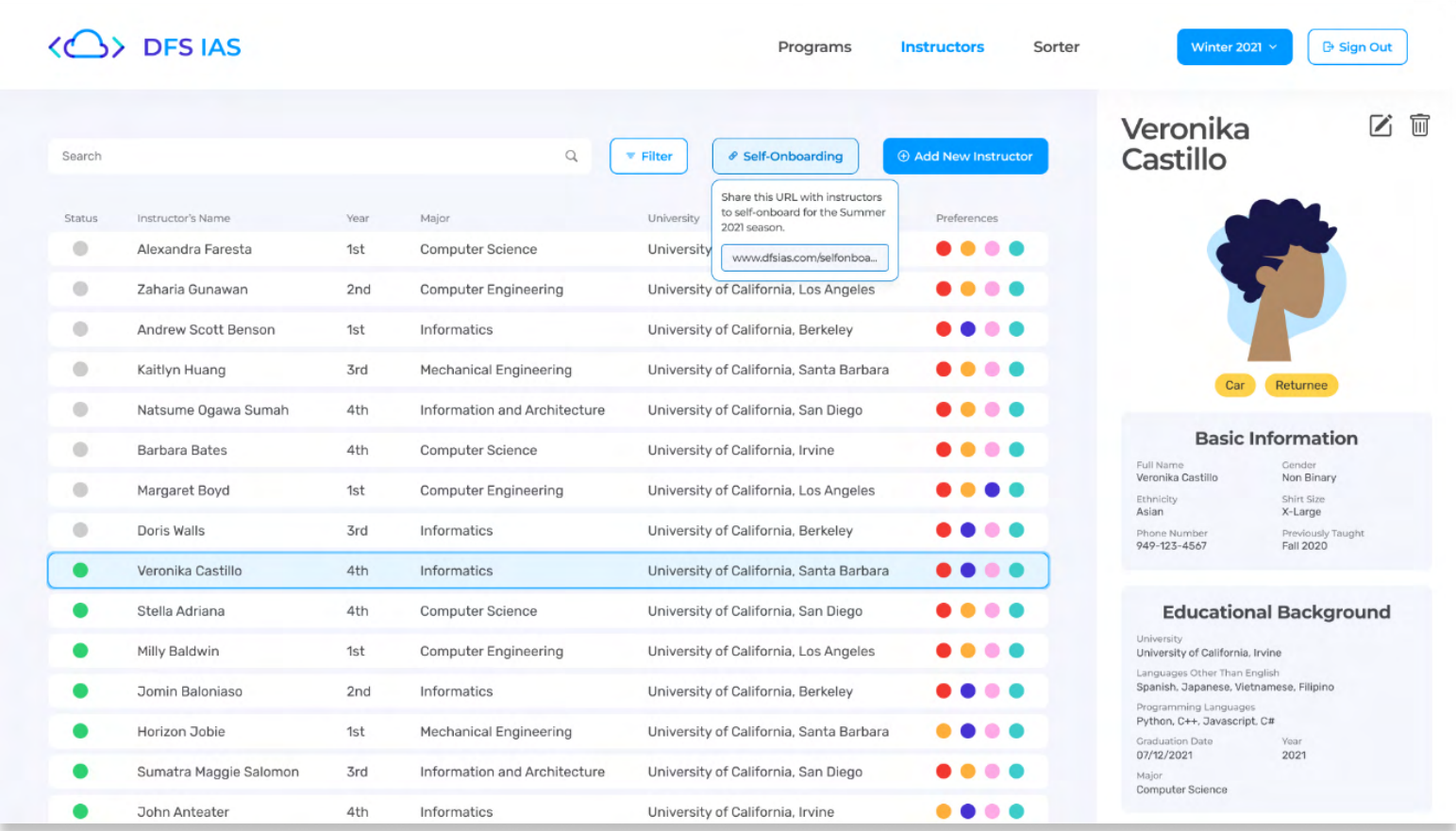
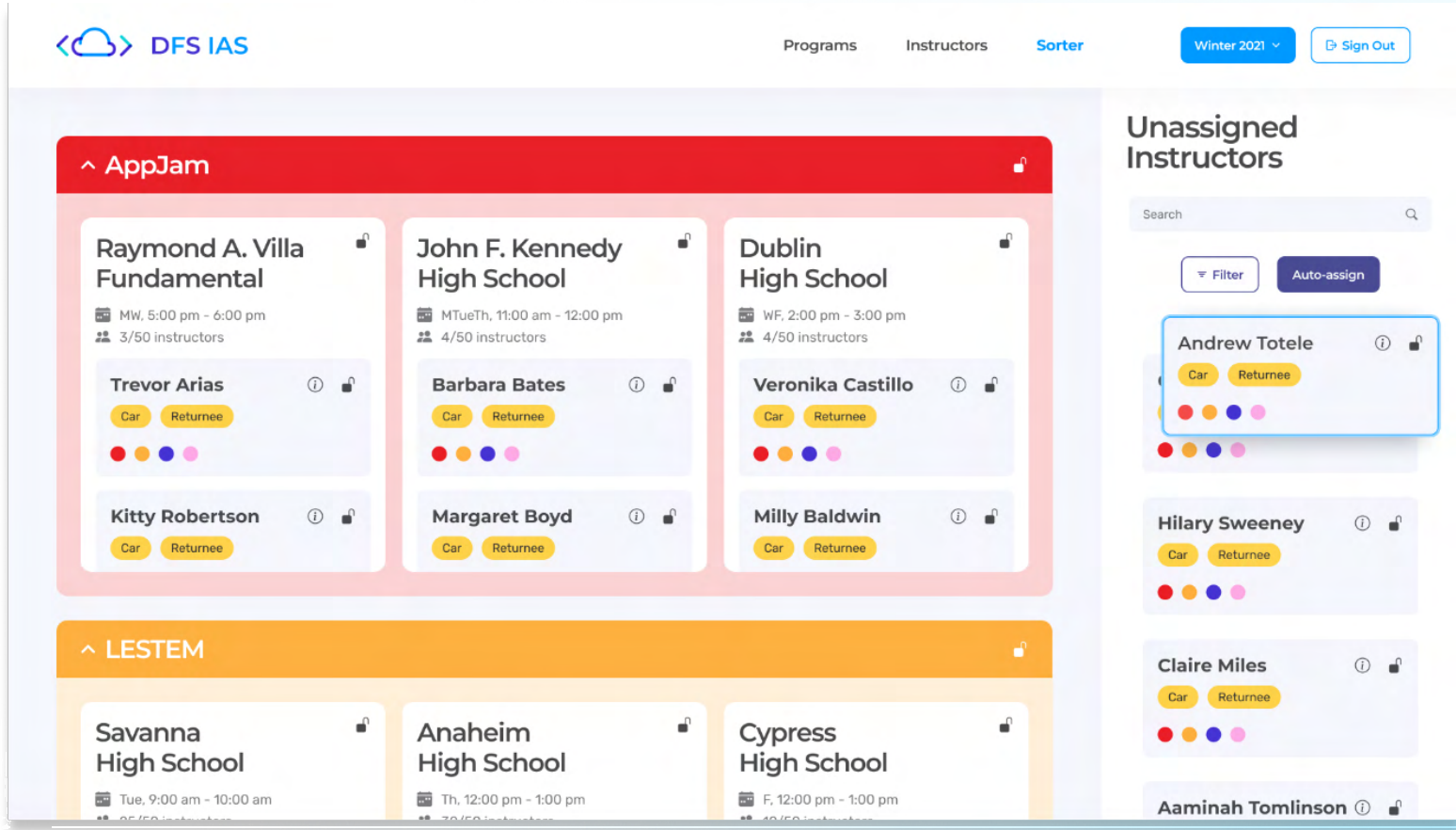
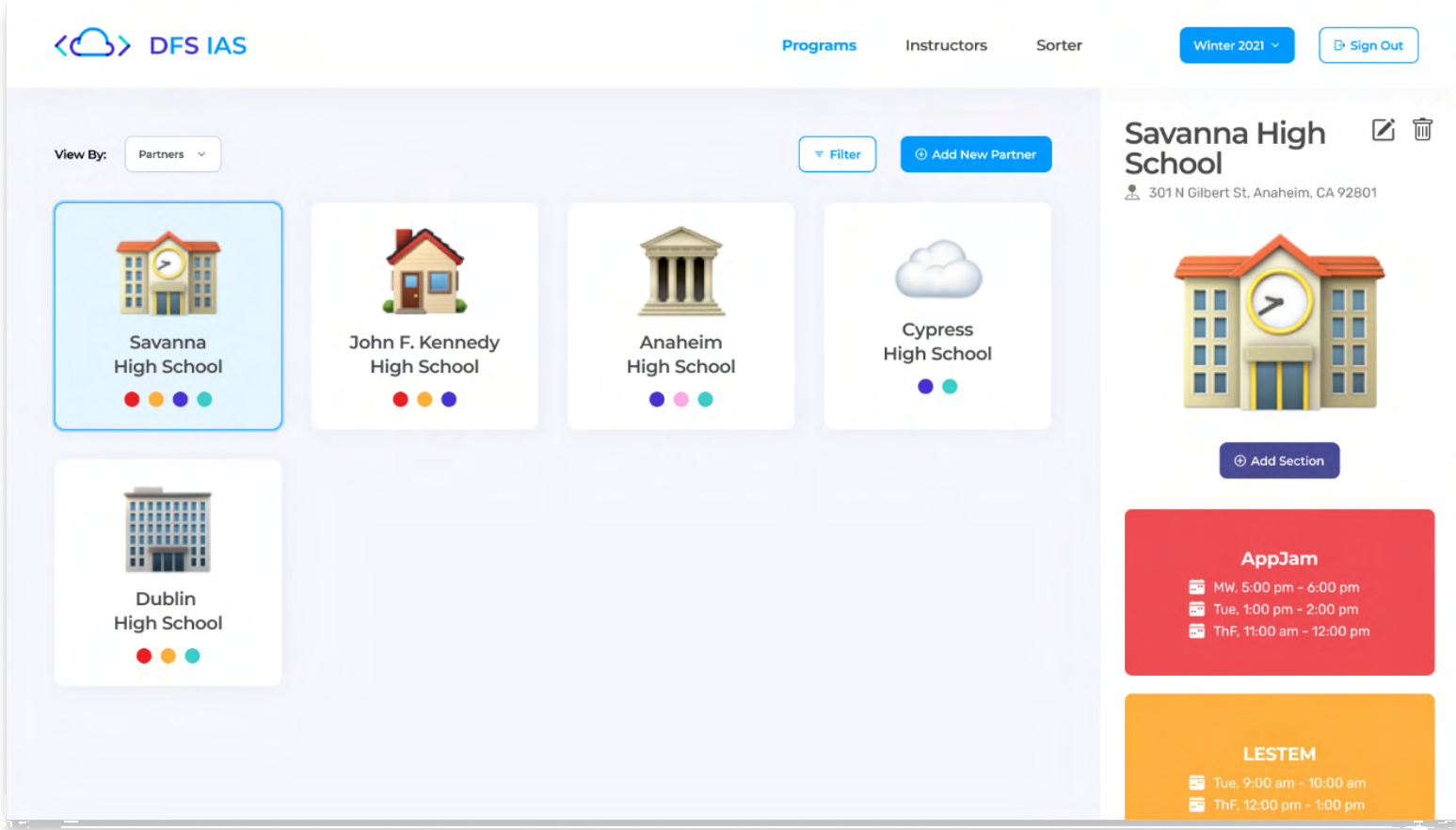
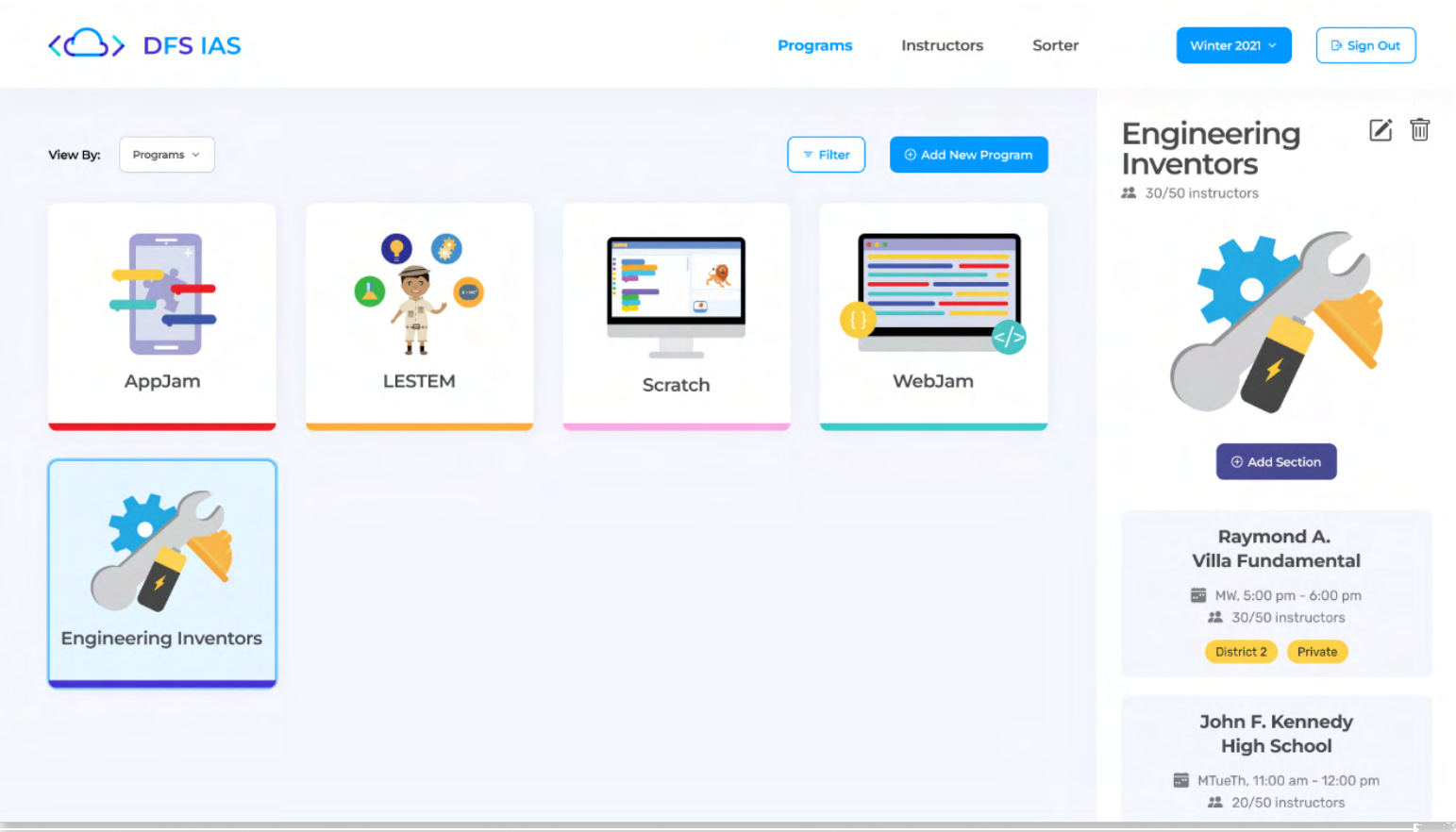
Insights:

- Required sidebar info for unassigned instructor counts
- Needed improved filtration by partner type and time slots
- Feature request: Instructor look up from previous seasons.
- Information overload on instructor cards. Move to modals.



The Results: High Fidelity Designs

Iterations 4-8



Prototype / Video Demo