



Tailored Tutoring Co.



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The Online Tutoring Market

- Online Tutoring Industry: Globally valued at \$63.57 Billion
 - Market will double by 2021 (12.75% growth/yr)
 - In the US alone:
 - 11,000 Jobs
 - \$411 million annual revenue

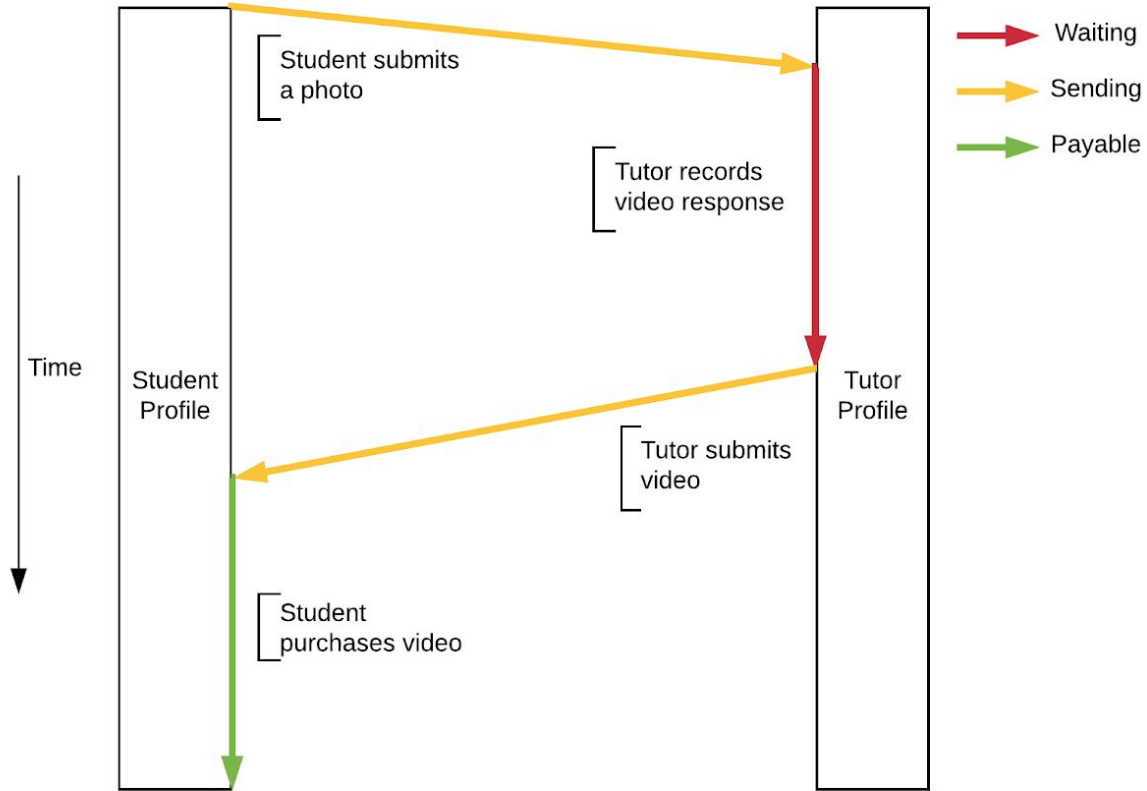


Our Client:



- Tailored Tutoring Co.
- CEO & Founder Rob Lokken
 - Individualized Study Help
 - Homework Submission Service
 - On-Demand Help, no appointments needed
 - Convenient and Easy-to-use

Ideal Service



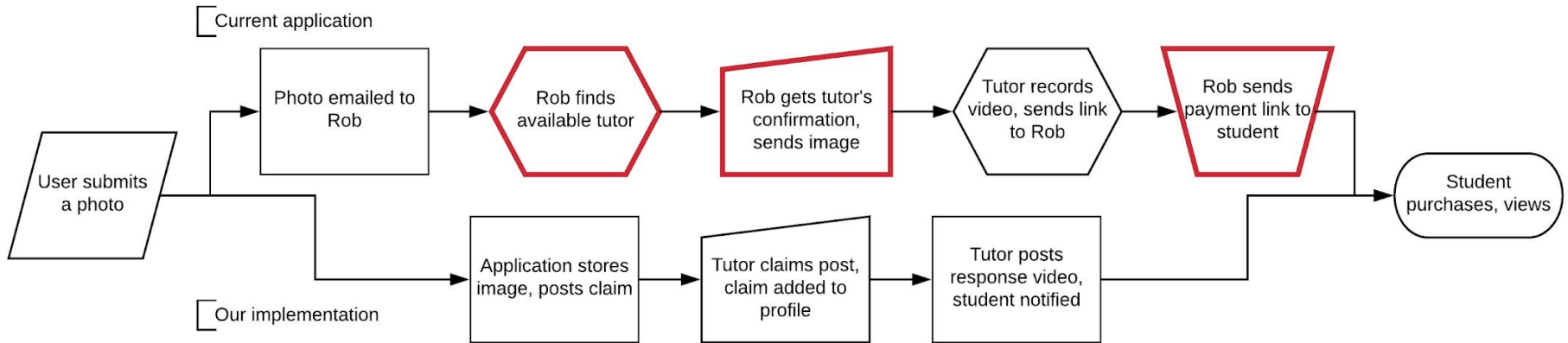


Problem Statement

- Current Process:
 - Not Automated
 - Very Tedious for Mr. Lokken
 - Clunky User-Submission process
- With our implementation
 - Automated & Intuitive
 - Clean User Interface
 - Streamlined Process

Workflow Comparison

 Rob Involved

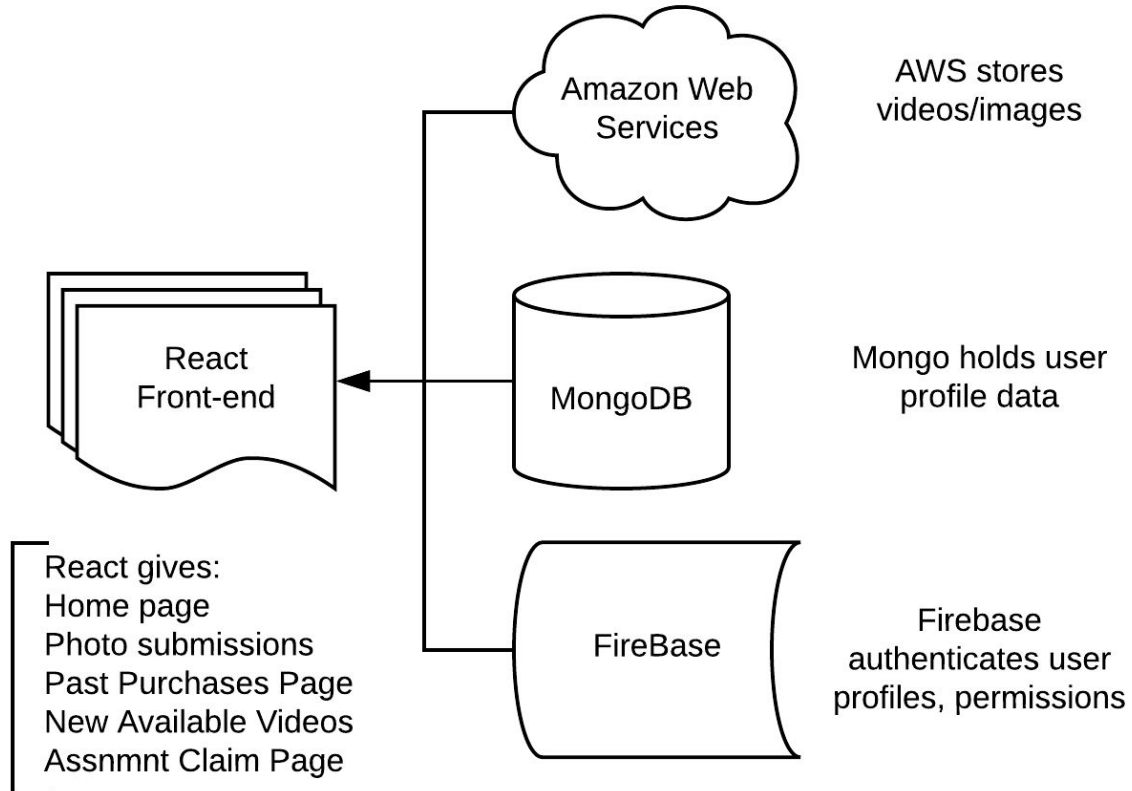




Key Requirements

- R1: Student & Tutor Profiles
 - Customizable for each User
- R2: Image and Video services
 - Students' homework photos
 - Tutors' video responses
 - Reporting submissions
- R3: Notification System
 - Assignment Claims
 - Video Notifications
 - Email Notifications
- R4: Integrated Payment
 - On-site Payment w/ Stripe
 - Third-Party Payment w/ PayPal

Implementation Overview



Prototype: Profile Creation

R1: User Profiles

First Name

Last Name

Email

Password

[Login](#)

Tell us which school you go to

Select multiple classes that you are in

| | |
|---------|---------|
| Math | Math |
| English | Science |
| Science | |

```
> {
  "_id": ObjectId("5acbe2449474481158283286"),
  "permission": "Student",
  "uID": "rplae9D0gYP77ngmZ9B1JVwp7qF3",
  "school": Object,
  "courses": Array
    0: "Math"
    1: "English"
    2: "Science"
  "name": "NAU",
  "_id": "5ac19ec09b530048e87c508f",
  "email": "abc123@abc.com",
  "lname": "Garcia",
  "fname": "Jesus",
  "courses": Array
    0: "Math"
    1: "Science"
  "_v": 0
}
```

App: Entering profile info

App: Choosing school/courses

DB: Student data object in MongoDB

Prototype: Logging On



Home Assignments

Tailored Tutoring Co.

Sign Up Log In

log in with Facebook

[F] Login with Facebook

Or email and password

abc123@abc.com

.....

Login

App: Logging in

A teal-colored user profile card. On the left is a grey placeholder for a profile picture. To the right of the picture, the text reads 'NORTHERN ARIZONA UNIVERSITY' in small caps, followed by 'Biology', 'Statistics', and 'Calculus' in a larger font. Below these subjects is a white button with the text 'Edit Profile'. Below the profile picture, the name 'Student TestStudent' is displayed.

My Subjects

Biology

Submit Assignment

View Past Submissions

Statistics

Submit Assignment

View Past Submissions

Calculus

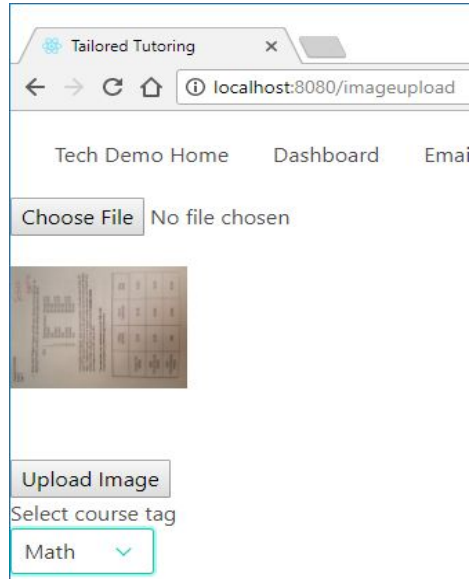
Submit Assignment

View Past Submissions

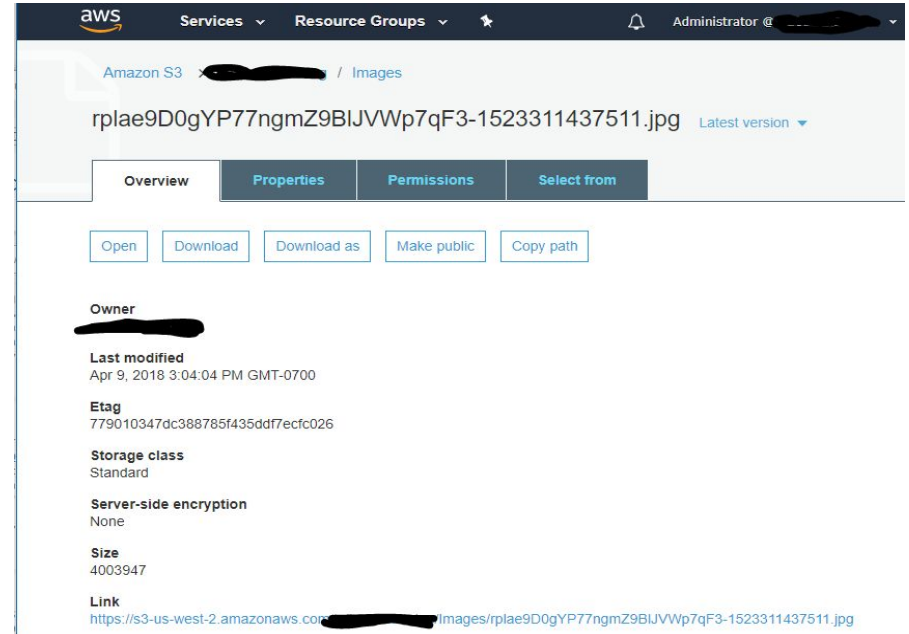
App: Home Page

Prototype: Image Submission

R2: Image and Video Services



App: Image Submission Page



AWS: Confirmation Page

Prototype: Claiming & Video Upload

Tech Demo Home Dashboard Email Example Image Upload

tutor view
View claimed clients

Select



rplae9D0gYP77ngmZ9BIJVWp7qF3
Math
Date uploaded: 3:03:57PM, 9 April 2018

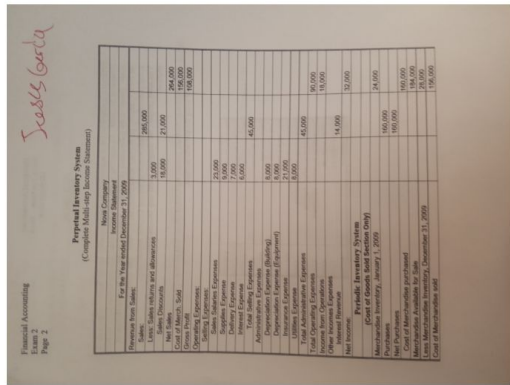
Claim image

App: Unclaimed Image

Tech Demo Home Dashboard Email Example Image Upload Paypal Example Sign Out

tutor view
Back to dashboard
Sort by course tag

Select



click here to download image

rplae9D0gYP77ngmZ9BIJVWp7qF3
Math
3:03:57PM, 9 April 2018

Choose File | small.mp4
submit video

App: Claimed Image
- Video posted

aws Services Resource Groups Administrator

Amazon S3 Videos

p57181NQNMMVeyofwc9ox5GvY3b73-1523311946525.mp4 Latest version

Overview Properties Permissions Select from

Open Download Download as Make public Copy path

Owner
Last modified
Apr 9, 2018 3:12:30 PM GMT-0700

Etag
a3ac7ddabb263c2d00b73e8177d15c8d

Storage class
Standard

Server-side encryption
None

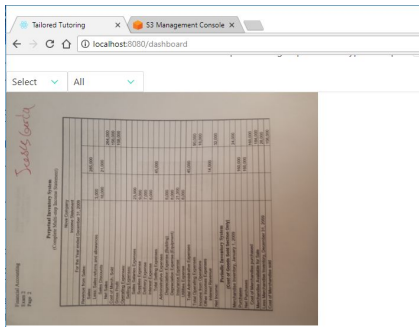
Size
383631

Link
https://s3-us-west-2.amazonaws.com/.../Videos/p57181NQNMMVeyofwc9ox5GvY3b73-1523311946525.r

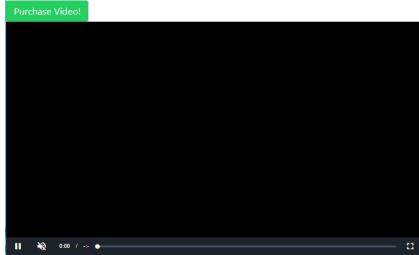
AWS: Video file saved

Prototype: Payment

R4: Integrated Payment



rp1ae9D0gYP77ngmZ9BIJVVWp7qF3
Math
Date uploaded: 3:03:57PM, 9 April 2018

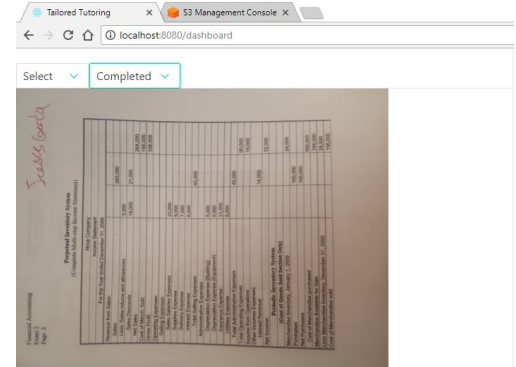


App: Blocked video

The screenshot shows the PayPal "Pay with PayPal" login screen. It includes the PayPal logo, the text "Pay with PayPal", a text input field for the email address (paypal-tester@tailoredtutoringco.com), a text input field for the password, a checkbox for "Stay logged in for faster checkout" (with a help icon), a blue "Log In" button, a link for "Having trouble logging in?", and a grey "Pay with Debit or Credit Card" button.

The screenshot shows a payment form with the following fields: "Card Number", "Expiration Month", "Expiration Year", "CVC", and a "Purchase" button.

App: Payment Options



rp1ae9D0gYP77ngmZ9BIJVVWp7qF3
Math
Date uploaded: 3:03:57PM, 9 April 2018



App: Available Video



Testing Plan: Unit Testing

- QUnit (with Sinon.js)
- Database Calls
 - Firebase
 - MongoDB
- Amazon Web Services (AWS)
 - Data storage
 - Emailing



Testing Plan: Integration Testing

- Data consistency
 - User information
 - States and Properties
- Retroactive Testing
 - Long workflows
 - Requirements are workflow-oriented
- Localhost to AWS EC2 Instance



Testing Plan: Usability Testing

Measurements:

1. Tasks

- a. # of Clicks
- b. Time to Completion
- c. Ex: *Student User uploads HW problem/image*

| Task | # of Clicks | Time Taken (mins) |
|---|-------------|-------------------|
| Student User uploads a HW problem/image | 4 | 2 |

2. Questionnaire

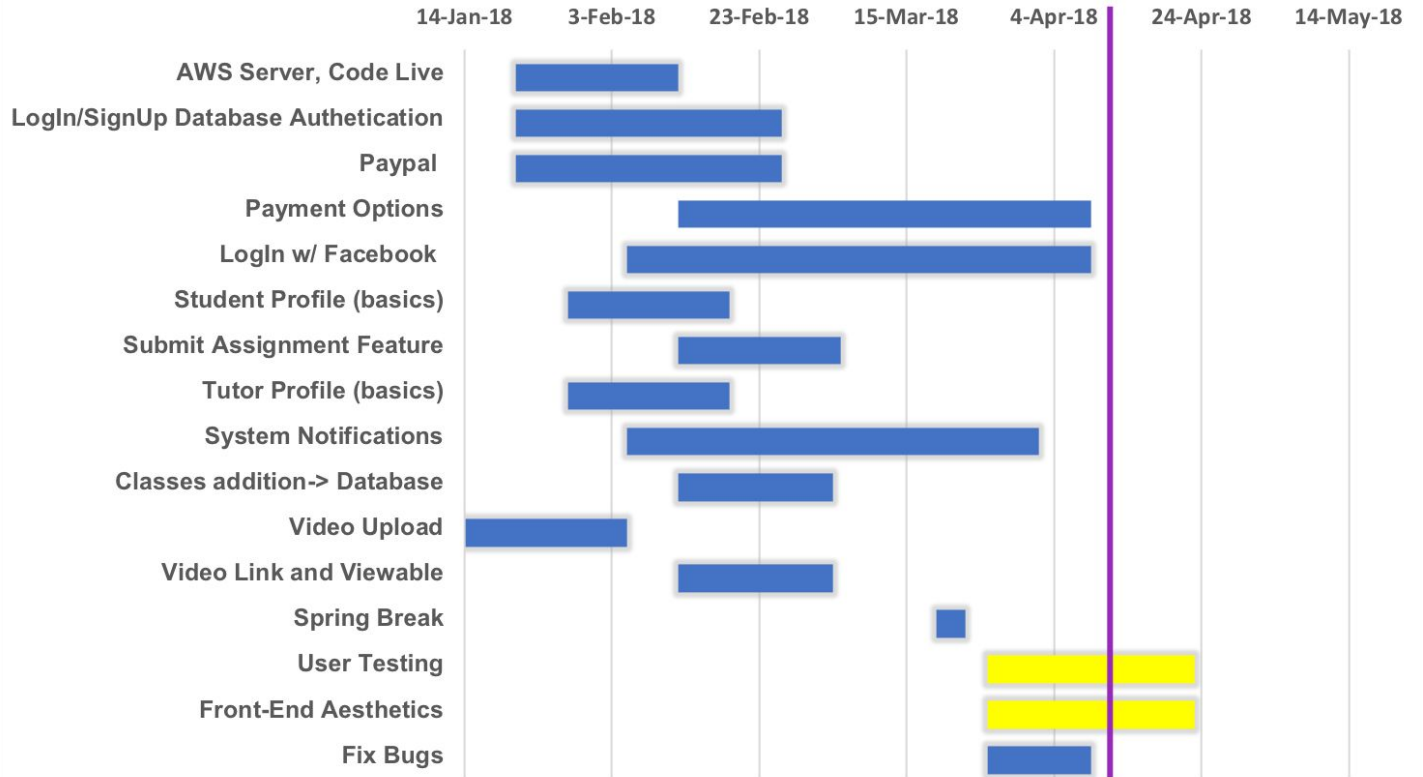
- a. Scale of 1 to 5
- b. Ex: *Was the web-application easy to navigate?*



Challenges & Resolutions

- Challenge 1 - AWS Free Limitations
 - Free Tier: 1GB of Memory
 - Upgrade: Client ready for ownership of AWS
- Challenge 2 - Intuitive User Interface
 - How to Accent/Highlight Actions
 - User testing will help

Features Timeline



Current Work



Conclusion



- Online Tutoring Platform -> \$\$\$\$
- Sponsor niche: HW Submission Feature
- Sponsor problem: Cumbersome manual operation
- Our solution: Web-Application Platform
 - Automated & Intuitive
 - Clean User Interface
 - Streamlined Process