Final Project for SW Engineering CSC648/848
Spring 2020
Team Number 5
Gator Media

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Viral Amin - Github Master

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Demo URL: http://ec2-18-207-139-31.compute-1.amazonaws.com:3000/

21 May 2020

2) Product Summary:

a) Product name: Gator Media

b) Product functions:
   - Unregistered and registered users shall be able to Register and Sign in for the Gator Media Store.
   - Unregistered and registered users shall be able to search the store content.
   - Unregistered and registered users shall be able to view any listing individually.
   - Unregistered and registered users shall be able to view the content's thumbnail from the main page.
   - Registered users shall be able to download free media.
   - Registered users shall be able to message other users directly about buying media content.
   - Registered users shall be able to post items for people to download or buy.
   - Registered users shall be able to provide a product description when they post an item.
   - Registered admin shall be required to approve or decline the pending posts from users.

c) What makes our product unique:

Our product offers a system specifically for San Francisco State University students and faculty, where they can purchase and or sell digital media for extra income. There are no advertisements and or web trackers, and students and faculty who create accounts on our site will be verified so buyers will know who they're purchasing from. Only San Francisco State University students and faculty will be able to access our site, however we are hoping to expand to other campuses as well.Our site ensures that digital media being sold and or shared won't get stolen and or plagiarized through admins who will approve each post.

d) LINK (We will provide this separately)

3) M1

SW Engineering CSC648/848 Spring 2020 Gator Media

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Milestone 1

History table: V 2.0

Gator Media

1. Executive Summary

Many students and faculty tend to have the need to utilize a medium where they can sell and purchase digital media content that they own in hopes to earn a little bit of extra income. There are plenty of sites that offer this kind of service, however some of these sites are not as secure and digital media can be replicated, stolen or plagiarized. There are some sites that require professional skills in order to be used, and there are times where students and faculty prefer to purchase locally from other fellow students/faculty members to support them. Some websites may also contain a lot of ads and unnecessary web trackers that could affect consumers when making purchases/transactions, and there can be instances where consumers aren't aware of who they're purchasing digital media from, as it could be from an unverified/unreliable resource.

Our product offers a system specifically for SFSU students and faculty where they can purchase/sell digital media for extra income. Our site ensures that digital media being sold/shared won't get stolen/plagiarized through admins who will approve each post. There are no ads and web trackers, and students and faculty who create accounts on our site will be verified so buyers will know who they're purchasing from. Only SFSU students and faculty will be able to access our site, however we are hoping to expand to other campuses as well.

We are a team of San Francisco State University computer science students hoping to provide our community with a better multimedia platform.

2. Personae and Main Use Cases

Jennifer (Personae 1):
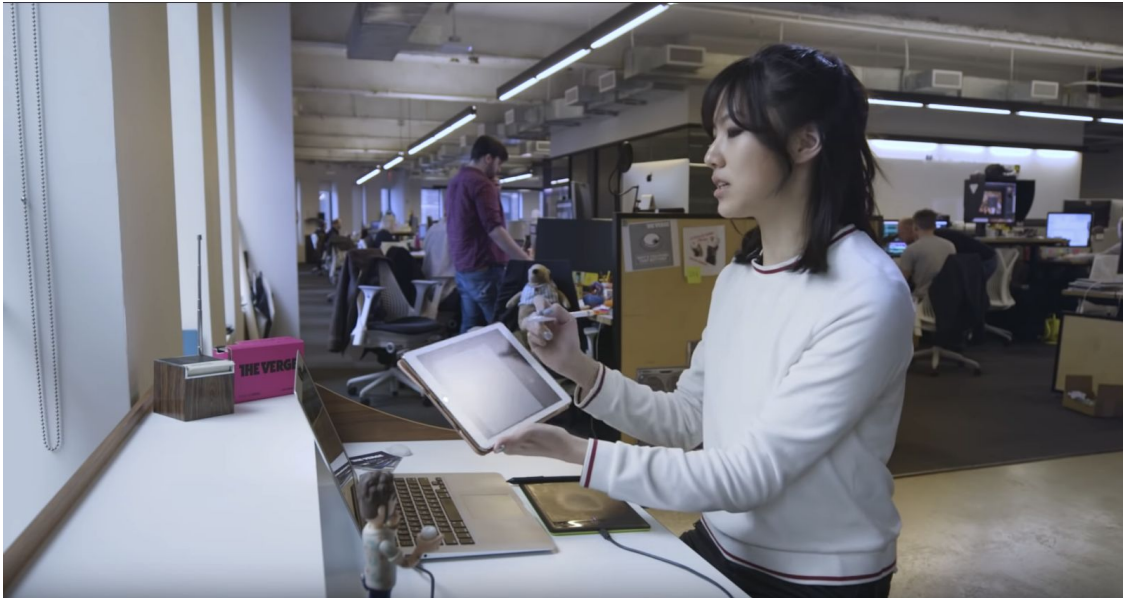
About Jennifer:
- Attending SFSU as a digital arts student.
- Loves to freelance draw (digitally on ipad) for clients for extra income.
- Has experience selling drawings to clients online.
- She attends multiple classes which does not leave her with the time to find buyers for her drawings.
- She is familiar with navigating through WWW applications.

Goals and scenario:
- For fun, Jennifer decided to draw some art work in between class breaks on her ipad. Jeniffer wants to make some extra income by selling her art.
- She doesn't have time to find people who want to buy her art, so she wants to be able to post it somewhere and have people contact her to buy it.

Ben (Personae 2):

About Ben:
- A student at SFSU studying film.
- Frequently makes short films/videos for class projects/assignments.
- Uploads films/videos to YouTube for his portfolio.
- Uses royalty free music for videos to avoid copyright claims.
- Spends his free time editing or shooting video content which makes it difficult to advertise or promote his projects.
- Familiar with using WWW applications.

Goals and scenario:
- Is working on a senior project film about SFSU students for his final assignment and wants to use local music created by SFSU students.
- He doesn't have time to go out of his way to find and interact with students who are willing to sell their music to him for his video.

Maria (Personae 3):

About Maria:
- SFSU professor that teaches ERTH 310.
- Updates her lecture slides each semester in order to provide students with updated/better material.
- Her lecture information is updated, but the media she uses as examples is made up of outdated earth/nature videos.
- Has basic WWW skills.

Goals and scenario:
- Wants to update some of her lectures to include more modern Earth/nature videos.
- Can search for/use YouTube videos, but would prefer to support the fine arts and use videos filmed/uploaded by local students.

Kevin (Personae 4):
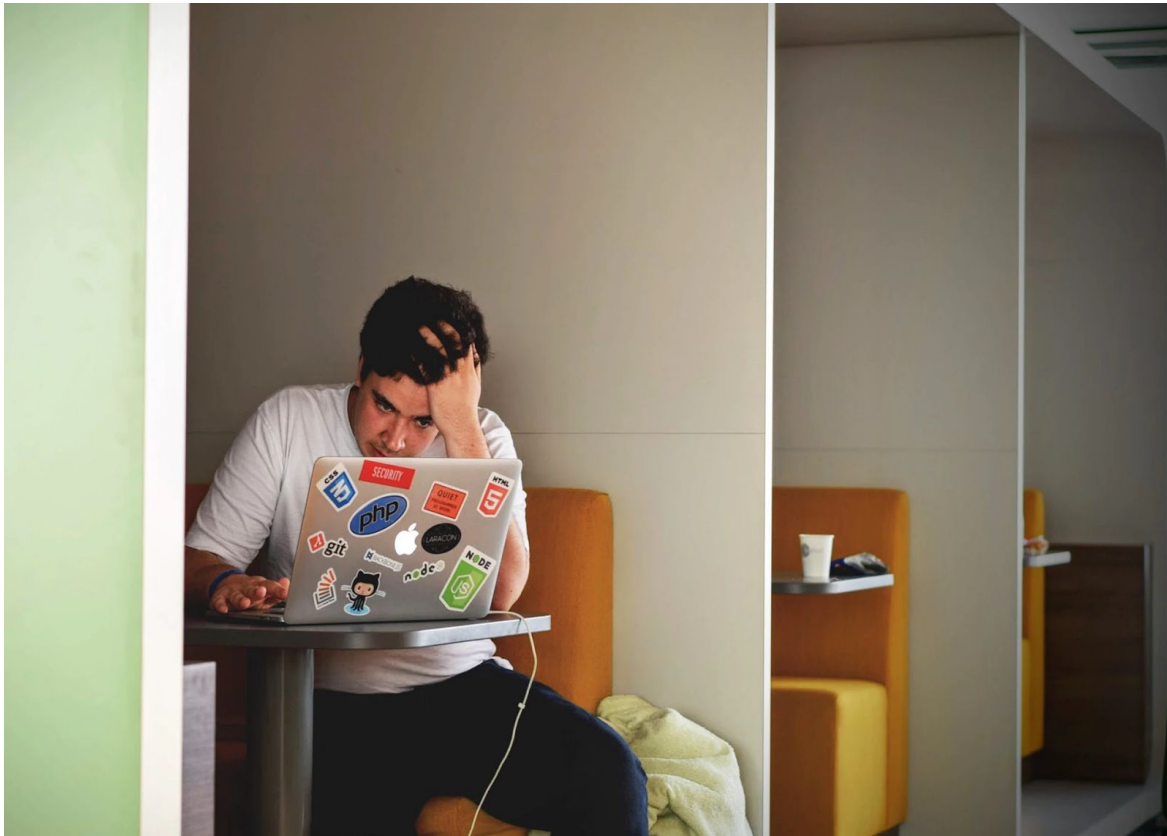
About Kevin:
- SFSU student that is enrolled in ARTH 201 Western Art History.
- Is looking for Western Art for an assignment.
- Knows our website due to using it previously for other courses.
- Knows that his professor has uploaded related course content on our website.

Goals and scenario:
- Is currently working on an assignment for ARTH 201 and is supposed to find related content for his topic.
- Would prefer not to spend all day searching for related content when he knows that his professor uploads content to the website.

Crystal (Personae 5):

About Crystal:
- SFSU Media Professor that wants to help her students sell their content.
- Has basic WWW skills.

Goals and scenario:
- Normally helps students sell their content on campus, but knows few people attend.
- Want's an online platform where her students can sell their media content.
- Doesn't trust large platform users from stealing and selling content on other sites.

Kyle (Personae 6):

About Kyle:
- Is an admin for Gator Media.
- Enjoys monitoring / administrating content that is posted.

Goals and scenario:
- Does not want explicit content to be posted.
- Wants users to be able to browse Gator Media without issues.

Use Case 1:
Jennifer wants to sell some of her digital artwork online for some extra income. She goes to our site and clicks on the link to post her own listing. She is prompted to login, and since she is an SFSU student, she is able to login with her credentials and uploads some previews of her art work along with the pricing for each piece. She waits for a buyer to contact her about her art via messaging, and sells it to them.

Use Case 2:
Ben wants to buy/obtain some music created by SFSU students for his film project, but doesn't have time to look for students willing to sell/give him music due to his tight schedule with school. Ben goes to our site and browses through the music section, listening to samples of students' uploaded songs. Ben attempts to contact one of the students selling a song, and is given a pre-field message window. Upon hitting contact, he's prompted to register/login. Once logged in, Ben contacts the owner and purchases their song.

Use Case 3:
Maria wants to search for and possibly download nature videos for her lectures. She goes to our site and looks for videos under the "nature" category. She finds a video (for free) that she would like to use for one of her lectures. She logs into her account and downloads the free content.

Use Case 4:
Kevin wants to find related content about his topic so that he can finish his assignment. Kevin already knowing about our site due to past courses decides to visit it. Kevin goes to our site and logs in since he already has an account. He searches based on Western Art and looks for images relating to his topic that are free. Kevin then finds the related content for his assignment and downloads it.

Use Case 5:
Crystal is looking for an online platform where her students can sell their media content. Crystal has heard from other faculty members in her department about our site. Since it's a site for only San Francisco State University Students and Faculty, Crystal trusts it more than other large platforms. Crystal decides to visit our website and browse it. Crystal finds the site easy to use and clearly sees a Post/Sell page. Crystal then navigates to the register page on our site. Crystal, finding it easy to use our site and register, then goes on to explain to her students how to use our site and sell their media content.

Use Case 6:
Kyle is an administrator for Gator Media. Kyle wants to keep the platform safe and clean for every user. Kyle logs in into his admin account in order to accept and or reject posts that are not fitting for the site. Kyle enjoys administrating Gator Media in order to help provide users with an enjoyable experience.

3.List of Main Data Items and Entities

Table:

    User:
1. Holds all the registration information of users.
2. Determine the privileges/accessibility of different types of users.
3. Each user can own multiple items.
4. Holds logs on the user's purchased items.

    Administrator :
1. Holds information on all administrators..
2. Able to approve/decline items from a pending list.
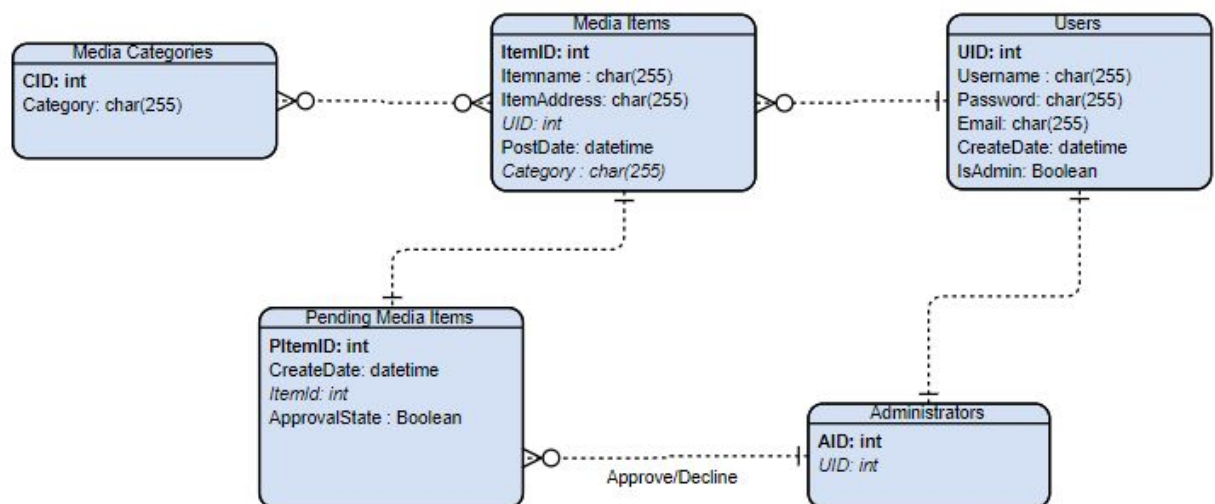
    Pending Media Items:
1. Holds all the items which are awaiting administrative approval.

    Media Items :
1. Holds all the information of each media item.
2. Each media item can only have one owner/user.
3. Holds the address of the actual items.

    Media Categories:
1. Holds each possible category and the pointers to the referenced items.

Media Categories
CID: int
Category: char(255)

Media Items
ItemID: int
Itemname : char(255)
ItemAddress: char(255)
UID: int
PostDate: datetime
Category : char(255)

Users
UID: int
Username : char(255)
Password: char(255)
Email: char(255)
CreateDate: datetime
IsAdmin: Boolean

Pending Media Items
PItemID: int
CreateDate: datetime
ItemId: int
ApprovalState : Boolean

Administrators
AID: int
UID: int

Approve/Decline

4. Initial list of functional requirements

Use Case 1: User that is registered:
1. Able to search
    ● User is able to search for media content
2. Able to login/register
    ● User is able to login/register
3. Able to post
    ● Able to sell / post for free.
4. Able to buy
    ● User is able to buy media content
5. Able to download
    ● User is able to download free content or purchased content
6. Able to post comments.
    ● User is able to post comments about media content
7. Able to post thumbnail
    ● User is able to post thumbnail for their media content
8. Able to see thumbnail
    ● User is able to see thumbnail of other media content
9. Able to see info based on what they are viewing.
    ● User is able to see a description about the media content

Use Case 2: User that is just viewing the website:
1. Able to search
    ● User is able to search for media content
2. Able to login/register
    ● User is able to login/register
3. Able to see thumbnail
    ● User is able to see thumbnail of other media content
4. Able to see info based on what they are viewing.
    ● User is able to see a description about the media content
5. Able to see Post option
    ● If user is not signed in redirected to sign in / register

Use Case 3: Admin:
1. Able to see admin page
    ● Admin is able to see admin page
2. Able to accept/reject posts
    ● Admin is able to accept/reject posts of users
3. Admin has register permissions
    ● Admin is able to do anything else a registered user can do.

5. List of non-functional requirements

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers.
3. Selected application functions must render well on mobile devices.
4. Data shall be stored in the team's chosen database technology on the team's deployment server.
5. Full resolution free media shall be downloadable directly, and full resolution media for selling shall be obtained after contacting the seller/owner
6. No more than 50 concurrent users shall be accessing the application at any time.
7. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
8. The language used shall be English (no localization needed).
9. Application shall be very easy to use and intuitive.
10. Google analytics shall be used.
11. No email clients shall be allowed.
12. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.
13. Site security: basic best practices shall be applied (as covered in the class) for main data items.
14. Media formats shall be standard as used in the market today.
15. Media material shall be either free or for sale, as determined by the media owner.
16. Each media material shall have its license info as one of the following:
    a) Free use and modification.
    b) Free but only allowed for SFSU related projects.
    c) For sale.
17. Modern Software Engineering processes and practices shall be used as specified in the class, including collaborative and continuous Software Engineering development.
18. The website shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2020. For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application).

6. Competitive analysis

Feature	Shutterstock	GettyImages	Adobe Stock	Gator Media
Browse	++	+	+	+
Post	+	-	+	+
Search by class	-	-	-	++
Comment	-	-	-	+

Planned advantages that we will provide compared to current products that are already available is being able to comment on media content in order for other customers to get an idea how other users felt about the media content. Other advantages are displaying product information about the media content, since other products either lack and or have minimalistic product information. A competitive advantage that we have compared with other platforms is the ability to search by courses, which will allow for SFSU students/faculty to be able to search for media content that is specific to a course.

7. High-level system architecture and technologies used

Server Host: AWS 2vCPU 4 GB RAM
Operating System: Debian 10.3
Database: MySQL 8.0
Web Server: Node 13.8
Server-Side Language: Javascript
Additional Technologies: N/A

8. Team and roles

- Ahmad Moussalli - Team Lead
- Felipe Carmona - Frontend Team Lead
- Pak Lik Siu - Backend Team Lead
- Viral Amin - Github Master
- Olivia Wissig - Frontend Team Member
- Nicole Bernardo - Frontend Team Member

9. Checklist

- Team found a time slot to meet outside of the class: DONE
- Github master chosen: DONE
- Team decided and agreed together on using the listed SW tools and deployment server: DONE
- Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing: DONE
- Team lead ensured that all team members read the final M1 and agree/understand it before submission: DONE
- Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc: DONE

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Nicole Bernardo - Frontend Team Member

Milestone 2

History table: V 2.0

1.Functional Requirements - prioritized

Grouped by Priority

Priority 1:

Unregistered:

1.1 Users shall be able to Register and Sign in for the Gator media store.

Registered:

1.1 Users shall be able to Register and Sign in for the Gator media store.

1.2 Users shall be able to download any free media when registered.

1.3 Users shall be able to post items to sell.

Admin: No priority 1

Priority 2:

Unregistered:

2.1 Users shall be able to search for content on the website.

Registered:

2.1 Users shall be able to search for content on the website.

2.2 Messaging functionality from buyer to seller.

2.3 Seller shall be able to post a description with the media item.

2.4 Users shall be able to access the user dashboard.

Admin: No priority 2

Priority 3:

Unregistered:

3.1 Uses shall be able to see mini-image (thumbnail) of the media.

Registered:

3.1 Users shall be able to see mini-image (thumbnail) of the media.

3.2 Users shall be able to post comments on the contents.

Admin:

3.1 Shall be able to access the database where admins can approve and or reject the media content that is posted.

3.2 Shall be able to query the data of the whole site.

2. List of main data items and entities

Users: This item shall store the registration information of the user like their name, email, and phone number. And it will store the privileges/accessibility of the user. The user item has types. Non-Registered, Registered, and Administrator. If the user has the type registered, the item will store all the items they have sold or purchased.

Media Items: This item holds information about the items like it's name, price, owner and location in the database.

Media Category: This item holds the names of the different categories.

3. UI Mockups and Storyboards

Registered User:

Kevin, who is already a registered user and is signed in, decides to visit the Gator media homepage. Kevin then decides to browse media content and clicks on Trees which are on the home page.
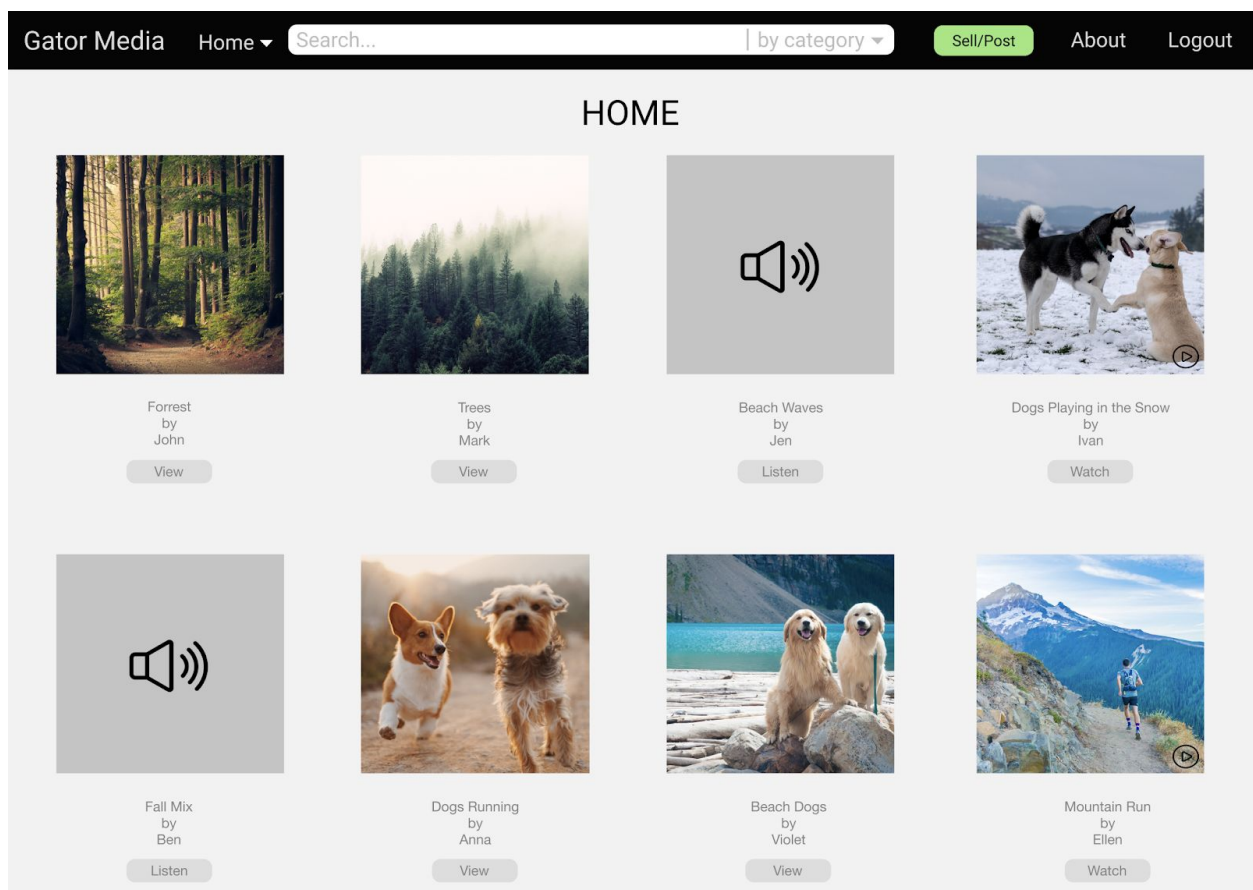
Kevin then clicks on the thumbnail of Trees in order to view the image and is shown the image with a contact option to purchase.

Description: Photo of trees engulfed in fog, taken at a hike near Three Rivers, CA

Trees by Mark

Contact

Upon clicking the "Contact" button, Kevin is shown a message indicating that the seller, Mark, has been contacted.

Gator Media   Home   Search... | by category ▾   Sell/Post   About   Logout

Description: Photo of trees engulfed in fog, taken at a hike near Three Rivers, CA

Trees by Mark

Mark has been contacted!

Kevin logs out and comes back to browse our site a few hours later. He finds free media content

in the form of a video and is given a download option if he so chooses to download it.

Dogs Playing In The Snow by Ivan

Upon pressing the "Download" button, Kevin is prompted to login/signup in order to download the free content.

Gator Media   Home   Search... | by category ▾   Sell/Post   About   Sign In
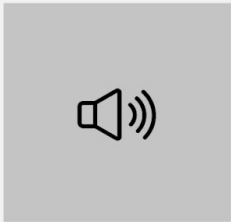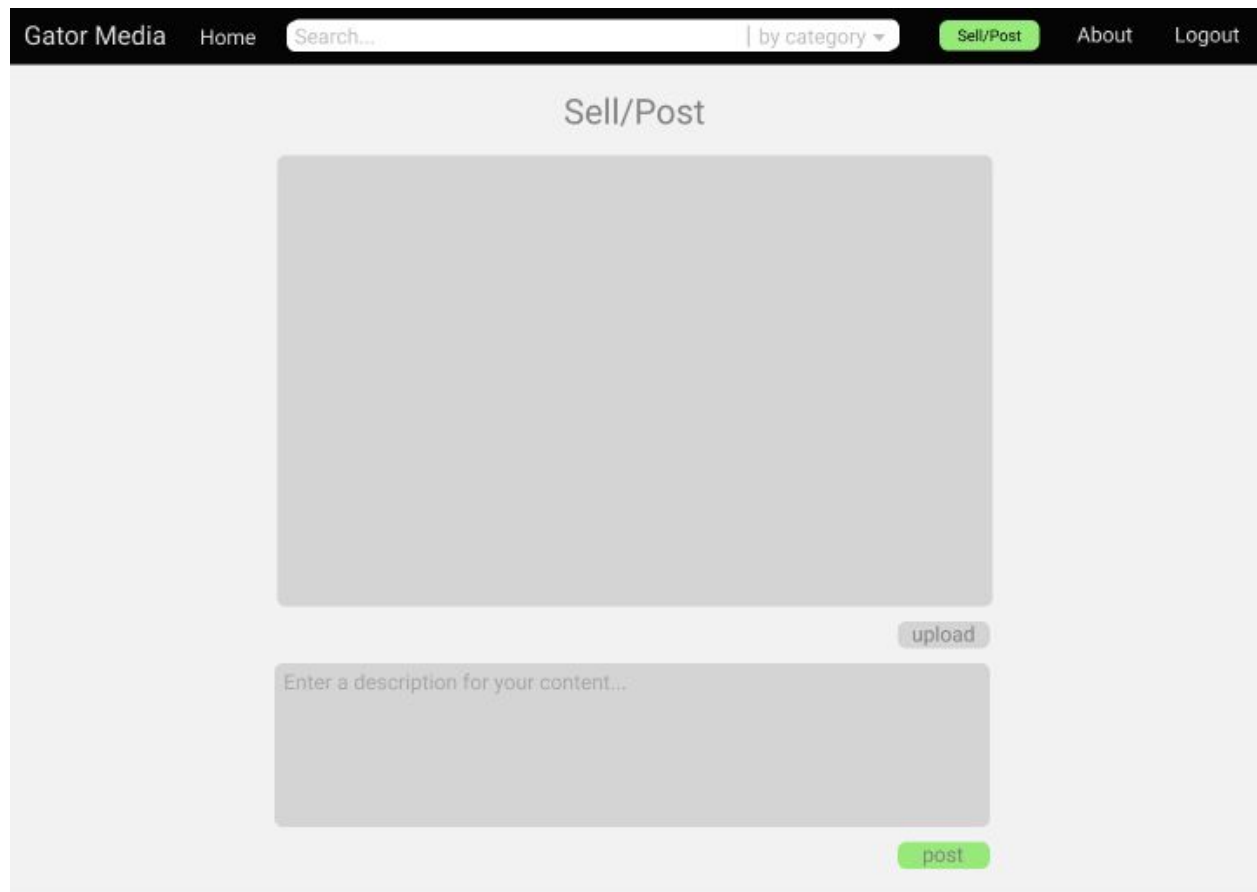
Description: Video of dogs playing in the snow, taken at Lake Tahoe

Dogs Playing In The Snow by Ivan

Please login/signup to download

Non-Registered:

Crystal is looking for a site in which her students can sell media content on. Crystal decides to visit Gator Media in order to check it out. Crystal notices a sell/post button and knows she is able to sell media content on our site.

Crystal enjoys our site and finds it easy to use, so she decides to sign up. Crystal clicks on the

Sell/Post but since Crystal is not signed in it redirects her to the Sign In / Register option.

Crystal wants to register, she clicks on the option and is prompted with information in order to register to Gator Media.

Crystal registers and then is signed in. Crystal then clicks on the Sell/Post option again and the Sell/Post page is displayed. Crystal is then able to upload her content to sell as well as add a description. Once Crystal posts her media content Crystal will need to wait for administrative approval.

User Dashboard:

Kevin, who is already registered on our site, wants to look at the posts he currently has posted.

Kevin goes to the Home page and clicks on the home tab. Kevin is then shown a dashboard link.
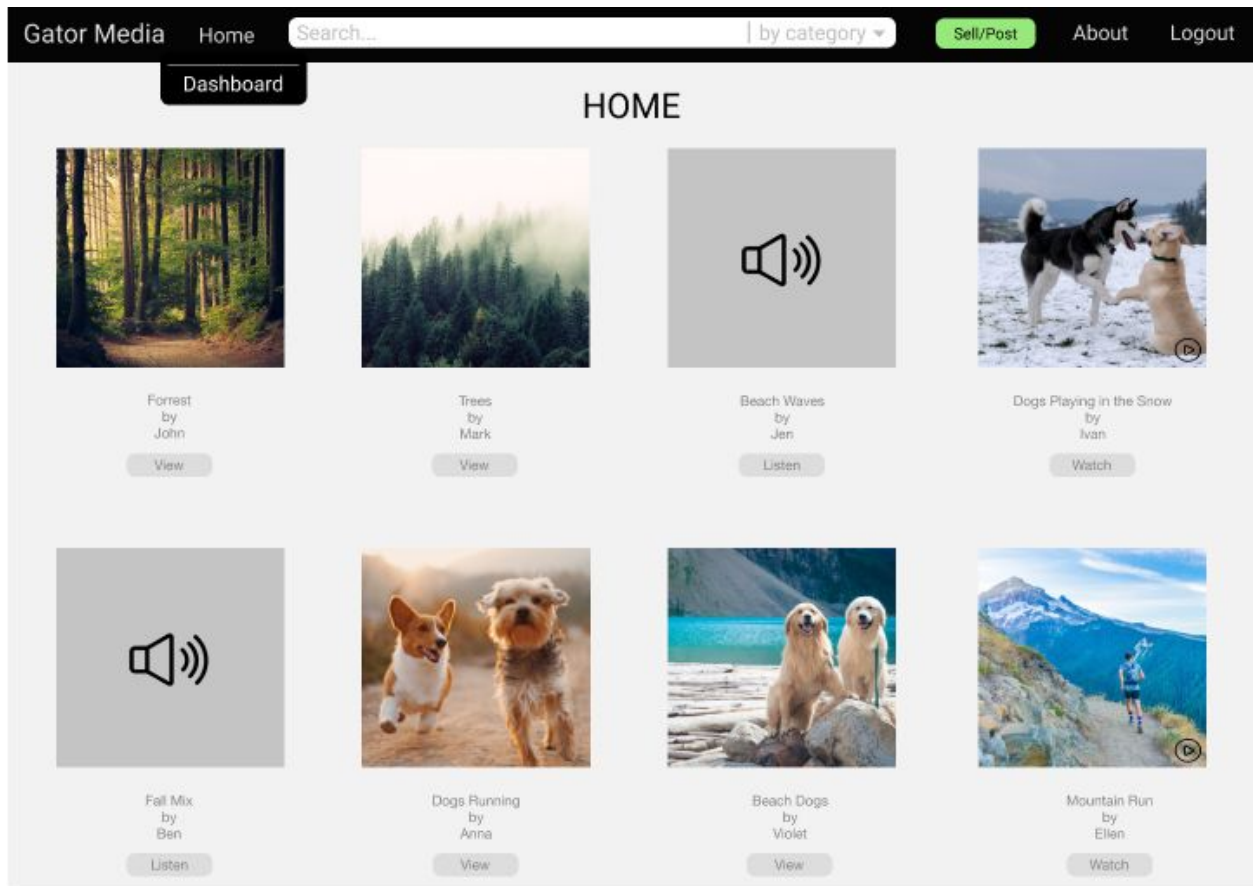
Once Kevin clicks on the dashboard link Kevin is redirected to the dashboard page, where he is shown his posts, as well as current pending posts.
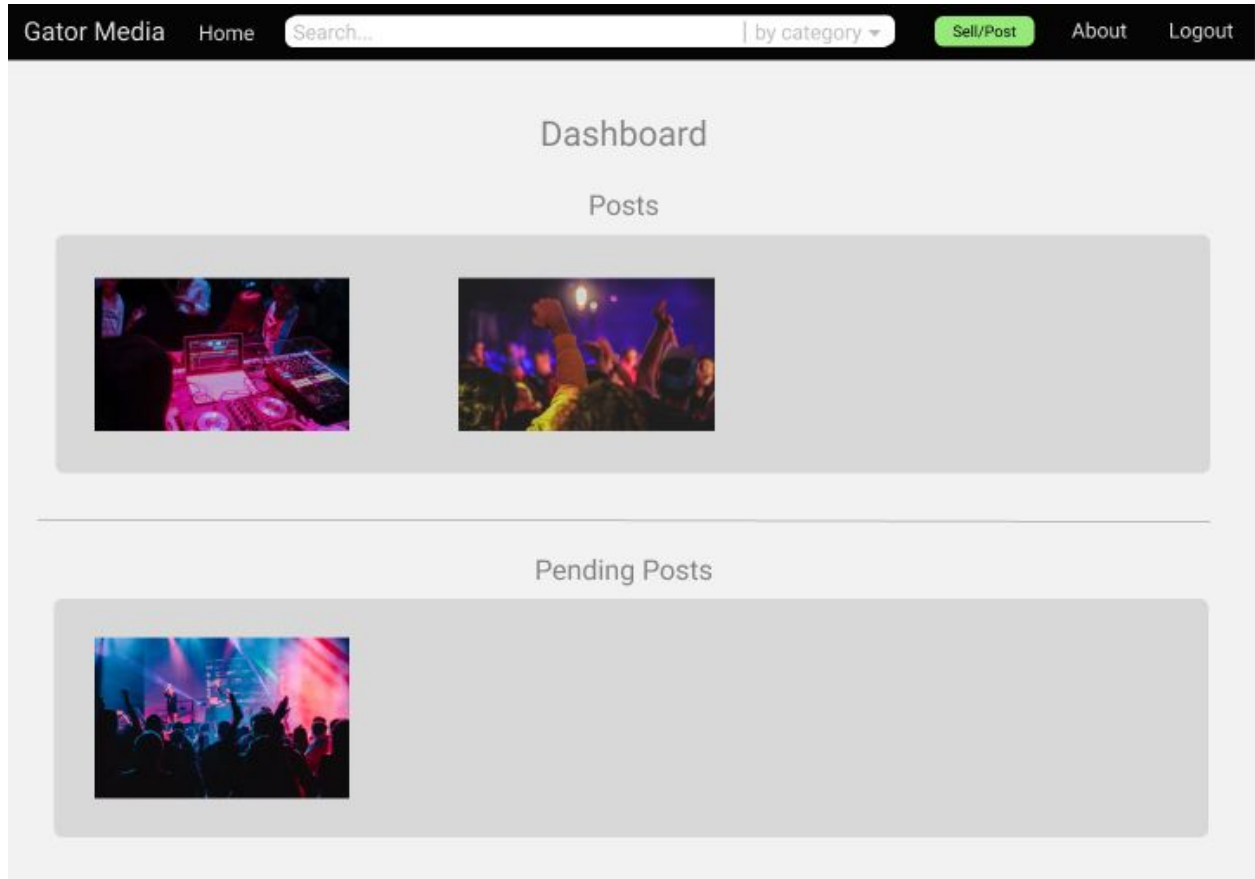
Admin:

Kyle an Admin for Gator Media logs in to his administrator account and is shown his

Administrator settings. He has three individual tabs for all posts, pending posts, and all users.

Kyle, being an Admin, wants to check for current pending posts that need to either be accepted and or rejected and then decides whether or not the media content being posted is appropriate for Gator Media. To make things easier, the approve and reject buttons are already visible to use.
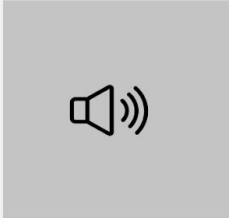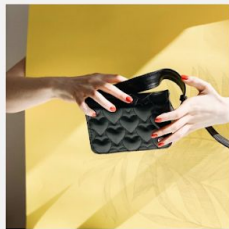
Kyle who is also a main Administrator is able to view a Manage Users page where he is able to

manage settings for each person who has registered on the website.

Gator Media Home | Search... | by category ▼ | Sell/Post About Logout

Manage Users

Jack White
SFSU Student

Manage

Marie Yu
SFSU Professor

Manage

Allie Roberts
SFSU Tutor

Manage

Regina Hernandez
SFSU Professor

Manage

Daniel Summers
SFSU Student

Manage

4. High level Architecture, Database Organization
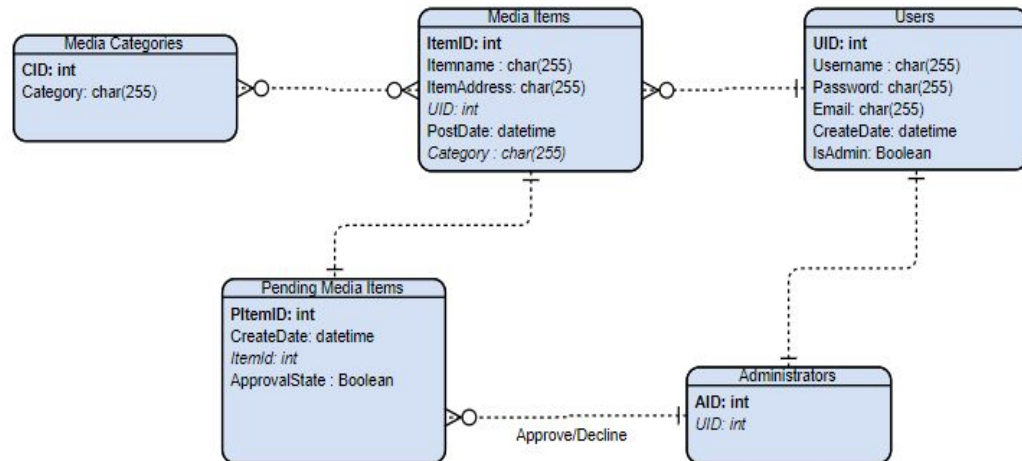
a. Media storage: Keep the video and audio in the file system, but store the file system address link in the database system/ MySQL.
b. For the search implementation we should be using the raw SQL language at first, but we will be using module and pg-promise to keep track/output the filter result.
c. No external API using for now.
d. For the non-trivial algorithm, we should have a different category of sort for the media, but sorting "created date" in descending order sequences by default.

5. High Level UML Diagram

Class Diagram:

User
userID: BigInt userName: String
login(String username, String password): void registration(dictionary) : void accountDetails() : dictionary updateAccountDetails(dictionary) : void logout() : void

mediaItem
mediaID: BigInt mediaType: String title: String description: String mediaURL: string
addMedia(dictionary) : void removeMedia(BigInt mediaID) : void getAllMediaItems() : dictionary getOneMediaItem(BigInt mediaID) : dictionary

Checkout
orderID: BigInt orderDate: Date
allOrderDetails() : dictionary oneOrderDetails(BigInt orderID) : dictionary

0..*   0..*

UML Component and deployment diagrams:

Amazon AWS Database

<<Database>>

<MYSQL>

Application

Amazon AWS EC2 Instance
webserver
respond

Output   request   Function/Action

Use Case

User/Local PC

UserInterface
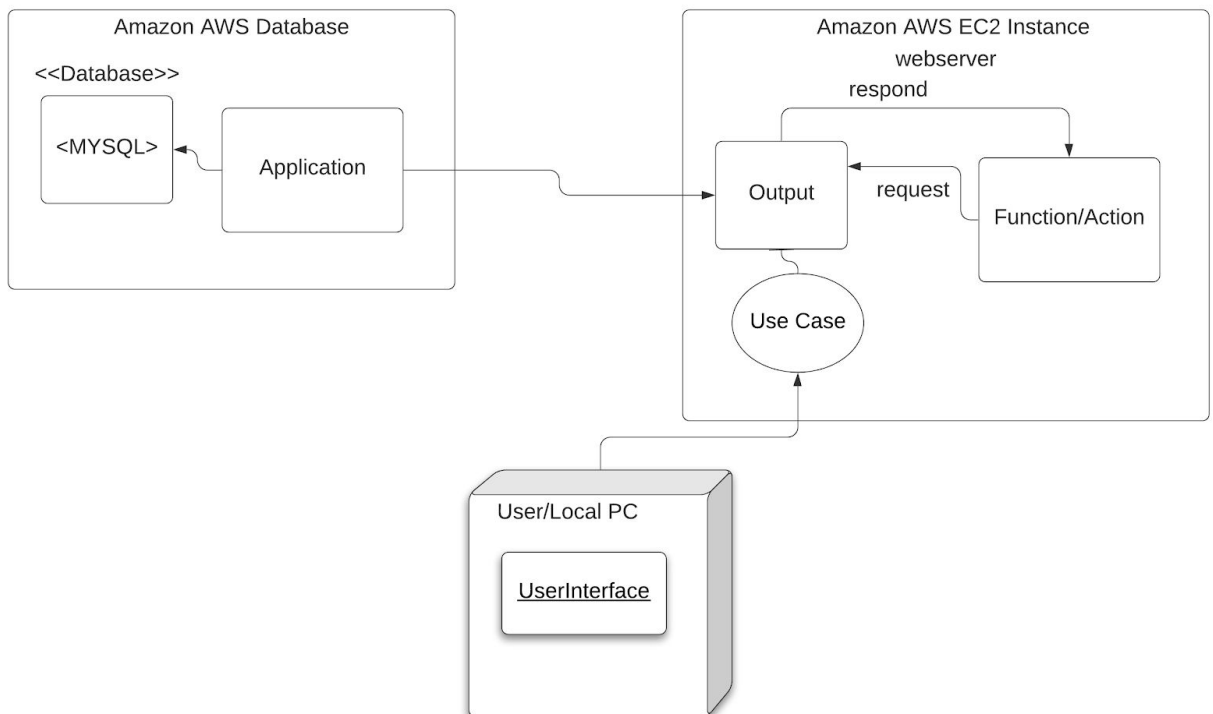
6. Identify actual key risks for your project at this time

- Schedule - If the shelter-in-place advisories continue for our region, we may experience some delays in some services which may impact our progress. It is hard to foresee how this situation will change, and how it may affect any dependencies our website relies on. To address this issue, we will have to be flexible with our current situation and try to finish milestones in advance therefore we have time to address and resolve any issues we run into. It would also be beneficial if we implemented and supported features that fulfill predetermined requirements to keep our productivity high.

- Technical - With many different users, there is a high possibility our users will all have different operating systems as well as varying browsers which may affect the design and format of our website. On the front end of our website, we plan to use frameworks like bootstrap which work across a number of popular browsers.

- Teamwork - The shelter-in-place advisories taking place around the world will affect our ability to meet face-to-face and interact in person. At times, it can be easier to resolve issues and review features when all team members are in the same room. Our response to this involves meeting online through zoom video conference calls and maintaining constant communication through slack. Meeting summary emails are to be sent out after every meeting summarizing the conclusions and decisions made during the meeting, as well as tasks for all team members and due dates for milestones and assignments.

- Legal/consent - For demo purposes, we have used a website where consenting users upload their content for free use (unsplash.com). The website is designed around users uploading content on their own which makes it hard to catch every infringement before anyone has viewed or downloaded it. When a user signs up, they agree that all the content uploaded by them is theirs and they are not breaking any type of copyright laws. For added supervision, we have added administrators and given them the ability to approve or deny posts from users. When a user uploads a post, it is filtered into the pending posts where administrators can approve a post or deny it. This way, it has a chance to be reviewed before becoming live to the public.

7. Project management

We decided to use Trello in one of our first meetings as a group, and it has proven to be useful for all members in our group. We are able to divide the work evenly, and see the work that has been done versus the work that needs to be completed. Whenever we have been assigned a new milestone, we have set up a video conference call and divided the work based on members' skill levels and comfort levels.

For future tasks, we plan on following the same process of dividing the assignment into individual tasks. We will continue to use Trello to keep track of which members are responsible for certain tasks which promotes accountability. Of course we are always willing to help others with their task if needed. We utilize Google Drive to edit our documents, which allows us to collaborate much easier and seamlessly merge all our individual tasks into one.

5) M3 Summary Report and Plans

6) M4

SW Engineering CSC648/848 Spring 2020
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Milestone 4
18 May 2020

History table: V 2.0

1) Product summary:

a) Product name: Gator Media

b) Product functions:

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d) LINK (We will provide this separately)

2)Usability test plan:

Usability test plan for search function:

- Test Objective: Test the ability of searching the content of the website for both registered and unregistered users while validating the accuracy of the search results.
- Test background and setup:
    - System setup:
        - Install docker for the host machine.
        - Clone the repository on the host machine.
        - Via a terminal, navigate the Application directory.
        - Run docker-compose up.
    - Starting Point:
        - After the application runs correctly.
        - Navigate site checking for easy use of site.
        - Intended users are the students and faculty of San Francisco State University.
    - URL
- Usability Task description:
    - Testing the correct functionality of the search bar
    - Tasks to do the test:
        - Test One
        - After the site has fully loaded
        - Test by finding anything throughout the site to determine usability.
    - Questions about about the results:
        - Effectiveness:
            - Were users able to find the search bar and search for an item?
        - Efficiency:
            - Did the site return the results in less than 10 seconds?
        - Lickert scale questions:
            - Please answer from 1 - 5 (5 is strongly Agree and 1 is strongly disagree)
            - As a user, you felt that accessing the site and finding the search bar was easy:
                - 1 Strongly disagree
                - 2 Disagree
                - 3 Neutral
                - 4 Agree
                - 5 Strongly agree

- As a user, you were satisfied with the search results relevance:
    - 1 Strongly disagree
    - 2 Disagree
    - 3 Neutral
    - 4 Agree
    - 5 Strongly agree
- As a user, you were satisfied with the time it took to get the results back:
    - 1 Strongly disagree
    - 2 Disagree
    - 3 Neutral
    - 4 Agree
    - 5 Strongly agree
- As a user provide optional comments and with the site

3. QA test plan:

- **Test objectives**
  - Test the ability of searching the content of the website for both registered and unregistered users while validating the accuracy of the search results.
- **HW and SW setup**
  - **Hardware:**
    - MacOS running Docker
  - **System setup:**
    - Install docker for the host machine.
    - Clone the repository on the host machine.
    - Via a terminal, navigate the Application directory.
    - Run docker-compose up.
  - **Starting Point:**
    - After the application runs correctly.
    - Check the existence of the search bar and the search button.
    - Check the existence of a few demo content.
  - Intended users are the students and faculty of San Francisco State University.
  - URL
- **Feature to be tested**
- **QA test plan (suggested format for QA test plan table)**

Test #	Test title	Test Description	Test input	Expected correct output	Test Results (PASS/FAIL)
01	Search bar exist	The search bar should be visible in the main page of the application at all time	N/A	Visible search bar	PASS
02	Search button works	The search button should update the main page content when pressed	Text "Cat" in search bar Search button press	Update in the main page	PASS
03	Search results are relevant	The main page results should be relevant to the	Text "Cat" in search bar Search button	Returns as many items that are in database under cat	PASS

		searched term.	press	category	

When performing the testing, we followed the table above and tested the feature on two different types of browsers.

4. Code review:

a) Coding style used: Google Javascript coding style (https://google.github.io/styleguide/jsguide.html)

b) Example of asking for feedback on the code:
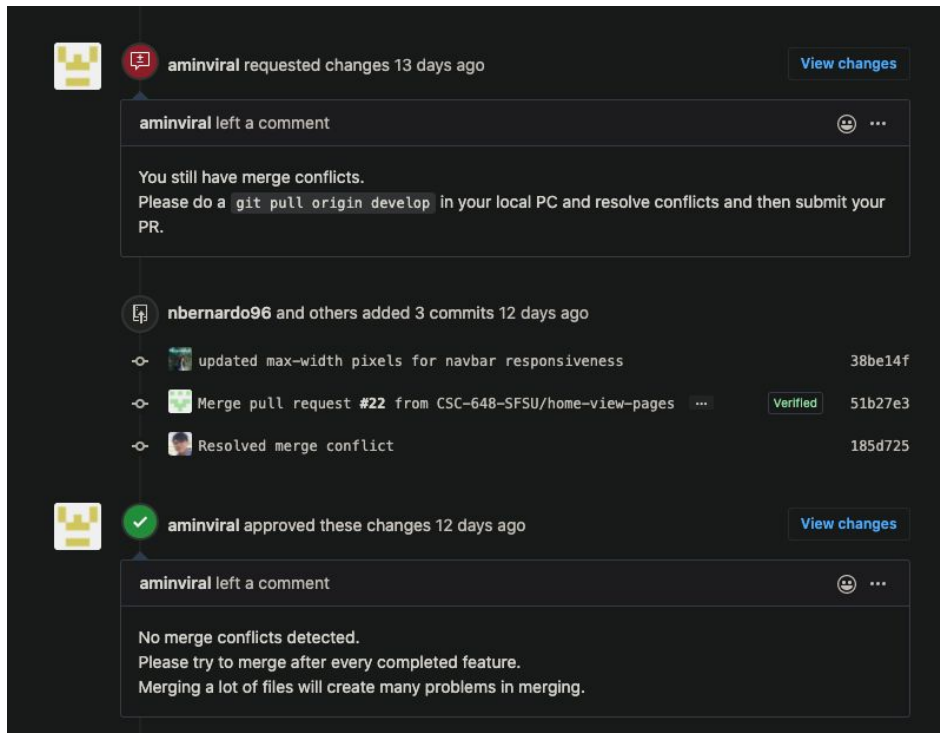
Example for the feedback:
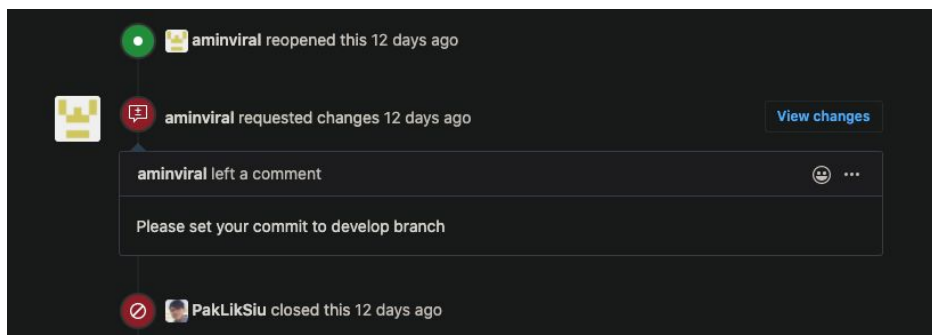
Example of the code:

```
165   +
166   +
167   +
168   + exports.getIndex = (req, res, next)  => {
169   +       db.query('SELECT * FROM sys.media_table', function (error, results, fields) {
170   +               items= results
171   +       });
172   +       db.query('SELECT DISTINCT category FROM sys.media_table', function (error, results, fields) {
173   +               categories= results
174   +       });
175   +       if (req.isAuthenticated()) {
176   +               res.render('index', {
177   +                       user: req.user,
178   +                       item: items,
179   +                       category: categories,
180   +                       searchCate: "All categories",
181   +                       title: ""
182   +               })
183   +       } else {
184   +               res.render('index', {
185   +                       user: "",
186   +                       item: items,
187   +                       category: categories,
188   +                       searchCate: "All categories",
189   +                       title: ""
190   +               })
191   +       }
192   + }
```

5. Self-check on best practices for security

- Major assets we are protecting
  - SFSU students - we require an SFSU account when registering for the website
  - Customer data - in order to download a product/listing, the user must be signed in with their registered SFSU email.
  - Copyright rights - there are a select few users who are administrators and have the responsibility to review and approve posts to ensure they are free of any copyright infringements.
  - User authentication - in addition to requiring SFSU emails, the login process requires completing a captcha process.
  - Password encryption- user passwords shall be encrypted in order to prevent them from being see
- Major threats for our assets
  - SFSU students - anyone that is not an SFSU student and faculty cannot sign up for our site, they must provide a valid sfsu email address upon registration - this filters out unknown and unassociated users.
  - Customer data - our process avoids the possibility of user data getting leaked or used without permission by the owner.
  - Copyright rights - before the posts are published to the website for all users to see, they are filtered through an approval process by administrators who review the uploaded content and ensure no rights are violated.
  - User authentication - the captcha implementation assures that a human is registering for our website, and not a bot or automated process that can be harmful or a threat to our website.
- We have confirmed that the passwords stored in the database are encrypted.
- Validation
  - Captcha
    - Google captcha
  - Email validation
    - Script written in code to validate email contains "@sfsu.edu"
  - Password protection
    - Encrypted in database
  - Search bar, not more than 50 characters
    - Custom lines of code that restrict input value to 50 characters or less
  - Upload only consists of images
    - The only type of files allowed in the upload are JPEGs (images)

6. Self-check: Adherence to original non-functional specs

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO). **DONE**
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers. **DONE**
3. Selected application functions must render well on mobile devices. **DONE**
4. Data shall be stored in the team's chosen database technology on the team's deployment server. **DONE**
5. Full resolution free media shall be downloadable directly, and full resolution media for selling shall be obtained after contacting the seller/owner **DONE**
6. No more than 50 concurrent users shall be accessing the application at any time. **DONE**
7. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users. **DONE**
8. The language used shall be English (no localization needed). **DONE**
9. Application shall be very easy to use and intuitive. **DONE**
10. Google analytics shall be used. **ON TRACK**
11. No email clients shall be allowed. **DONE**
12. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI. **DONE**
13. Site security: basic best practices shall be applied (as covered in the class) for main data items. **DONE**
14. Media formats shall be standard as used in the market today. **DONE**
15. Media material shall be either free or for sale, as determined by the media owner. **DONE**
16. Each media material shall have its license info as one of the following:
    a) Free use and modification.
    b) Free but only allowed for SFSU related projects.
    c) For sale.
    DONE
17. Modern Software Engineering processes and practices shall be used as specified in the class, including collaborative and continuous Software Engineering development. **DONE**
18. The website shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2020. For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application). **DONE**

7) Product Screenshots

Register Page

Login Page

Home Page

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

Title : city

description: city

View

Title : sun

description: This is a sun

View

Title : Horse

description: Horses eating

View

Title : Cat

description: Cat on a chair

View

Title : Horse

description: Horses

View

Title : Bridge

description: Bridge at night

View

Title : Bread

description: Bread and coffee

View

Title : Tree

description: This is a tree

View

Media Page

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

Title : Bread

Description: Bread and coffee
category: Food

Download

Sell Page

All categories | Search | Search | Sell/Post | About | Dashboard | Logout

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

Sell/Post

Choose File | No file chosen

Media Name:

Enter title

Description:

Description of your post

All categories

Free for all? :

○

Free

○

Not Free

Post

User Dashboard Page

Gator Media

All categories | Search | Search | Sell/Post | About | Dashboard | Logout

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

User Dashboard

--user : nbernard@sfsu.edu

This is your user dashboard. Here you can see everything you've posted, messages between you and other users, and posts that have been submitted, but have not been approved yet.

Messages

Date	Name	Message

Active Posts

Your approved and listed posts will appear here.

Pending Posts

Your posts awaiting approval will appear here.

Admin Dashboard Page

Gator Media   All categories   Search   Search   Sell/Post   About   Dashboard   Logout

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

Admin Dashboard

This is your administrator dashboard. Here you can see posts that are waiting administrator approval, users you can manage, and all posts that have been approved and posted.

Pending Posts

Posts waiting for admin approval will appear here.

name: SFSU Gator Test.jpg

description: this is the sf gator logo

category: Animal

current status: pending

is it Free?: True

Approved
Decline

About Page

Gator Media   About   Login   Register

SFSU Software Engineering Project CSC 648-848, Spring 2020, For Demonstration Use Only

Spring 2020
Section 01
Team 05

Ahmad Moussalli
Team Lead

Felipe Carmona
Frontend Team Lead

Pak Lik Siu
Backend Team Lead

Viral Amin
Github Master

Nicole Bernardo
Frontend Team Member

Olivia Wissig
Frontend Team Member

8) DB Organization

Example of the User database:

```
CREATE TABLE `users_table` (
    `id` int(11) NOT NULL AUTO_INCREMENT,
    `password` varchar(255) DEFAULT NULL,
    `email` varchar(255) DEFAULT NULL,
    `createdAt` datetime NOT NULL,
    `updatedAt` datetime NOT NULL,
    `isAdmin` varchar(255) NOT NULL,
    PRIMARY KEY (`id`)
) ENGINE=InnoDB AUTO_INCREMENT=13 DEFAULT CHARSET=utf8
```

id	password	email	createdAt	updatedAt	isAdmin
3	$2b$10$IqqSi.eNo7QAcvLLNLbgkuCQPr5OilG...	abc@sfsu.edu	2020-05-17 00:50:01	2020-05-17 00:50:01	False
1	$2b$10$eOqW45d9HFhuCRWpyY3M.OksA3Sc...	admin@sfsu.edu	2020-05-17 00:47:37	2020-05-17 00:47:37	True
10	$2b$10$74e3uj2wtlvsICPJ6Te/7.OKkAj9uKR7C...	ahmad@sfsu.edu	2020-05-21 22:13:25	2020-05-21 22:13:25	True
12	$2b$10$iltiA/ru.pstYZaD.cel/.GGAaRgQEgK7h...	cba@sfsu.edu	2020-05-21 23:07:22	2020-05-21 23:07:22	False
7	$2b$10$dlHXY/slXfZzkQqvFfVIRO7xlDed0L8t1f...	fcarm@sfsu.edu	2020-05-20 20:04:01	2020-05-20 20:04:01	
4	$2b$10$s0YHNBj8vz0A9RsO4CYrsOQg2dU6n...	nbernard@sfsu.edu	2020-05-18 02:14:04	2020-05-18 02:14:04	
5	$2b$10$8K.lwVOgbep2isRYmvUex.djLLyW8D7...	nbernard@sfsu.edu	2020-05-18 02:14:10	2020-05-18 02:14:10	
8	$2b$10$26Cgb7tCXsA8AtxVO6pT0eKNC5Eh9r...	nbernard@sfsu.edu	2020-05-20 21:53:20	2020-05-20 21:53:20	False
11	$2b$10$5xMGQ1uL20WwErqn//mtNORJvLnNa...	nonadmin@sfsu.edu	2020-05-21 22:32:53	2020-05-21 22:32:53	False
9	$2b$10$9oLJRaKoHQQKaYbTsCzZD.fhZi9mJl...	olivia@sfsu.edu	2020-05-21 18:44:52	2020-05-21 18:44:52	False
6	$2b$10$vaiwB.kmoauWRtH2ekNXbeWqGHreB...	testuser@sfsu.edu	2020-05-19 22:04:20	2020-05-19 22:04:20	True
NULL	NULL	NULL	NULL	NULL	NULL

Example of the Category database:

```
1   CREATE TABLE `categories_table` (
2       `cid` int(11) NOT NULL,
3       `categoryName` varchar(45) DEFAULT NULL,
4       PRIMARY KEY (`cid`)
5   ) ENGINE=InnoDB DEFAULT CHARSET=utf8
```

cid	categoryName
1	Animal
2	Nature
6	Music
7	Sport
8	People
9	Transportation
10	Space
11	Building
12	Religious
13	Food
NULL	NULL

9) Google Analytics

Google Analytics Home

INSIGHTS

Users	Sessions	Bounce Rate	Session Duration
0	0	0%	0m 00s

14 May   15   16   17   18   19   20

Last 7 days ▼

AUDIENCE OVERVIEW ›

Active Users right now

3

Page views per minute

Top Active Pages   Active Users

/   3

REAL-TIME REPORT ›

Ask Analytics Intelligence

WHERE YOU GET YOUR USERS FROM
Top campaigns by sessions excluding (not set) campaign over the last month

CONTENT ANALYSIS
Entrances and Exits for my top pages

BASIC PERFORMANCE
How many total new users did I have in the last 12 months?

MORE INSIGHTS ›

10) Project Management

11) Team Member Self Assessment and Contributions

Ahmad Moussalli
Thu 5/21/2020 9:30 PM
To: Felipe De Jesus Carmona; Viral Kantilal Amin; Olivia Nicole Wissig; Pak Lik Siu; Nicole Bernardo

Hello Team 05,

Below are team self-assessment and contributions:

a) His/her contributions to team project and teamwork (technical and any other) in no more than half a page – point format is OK.

- Organized team meetings.
- Ran team standups.
- Helped the team deliver milestones on time.
- Gave inputs on project design.
- Gave input on product architecture.

b) Number of submissions he/she made to github team dev. Branch

About 13 commits on the development branch (excluding feature branches)

c) One brief paragraph on main challenges he/she encountered in team project

Time management was my biggest challenge with this project. Followed by making decisions on tools used for the project's development.

d) One brief paragraph on what would he/she do better next time based on what was learned in the class about SE management and processes

I would use more diagrams to outline the application structure. I would have more often check-ins and better within the team deadlines rather than just following the class general deadlines.

It was pleasant working with you,
-Ahmad

Nicole Bernardo
Thu 5/21/2020 9:34 PM
To: Ahmad Moussalli; Felipe De Jesus Carmona; Viral Kantilal Amin; Olivia Nicole Wissig; Pak Lik Siu

Hello Team 05,

a) Contributions to team project and teamwork:

I was tasked with and worked on the frontend UI of the home page and the media/view content page for our project. I helped design the look of our site along with the navigation bar using figma, and then implemented the navbar on the home and media pages so that everyone can implement the same navbar to their respective pages. I also created the template html/css code for the about me pages for everyone.

b) Number of submissions made to github team dev. Branch

Number of commits to develop branch: 28

c) Main challenges encountered in the team project

One of the main challenges I encountered throughout this project is styling a page according to our wireframes/figma. It was really easy designing the website and each page but implementing it through html/css/bootstrap was challenging. Not only that, but adding responsiveness to each page was challenging as well because I haven't had much experience with that. Doing pull requests and merging my working branches with the dev branch was also quite tough because sometimes the merge would cause an issue in the dev branch and fixing that, most of the time, takes a while.

d) What would you do better next time?

I would most likely organize my html and css code better in the future. At the beginning of the project, my names for my classes in the html/ejs files were very confusing and messy. For example, I would have a class for each button in the navbar. This would later on get messy because I had to change the style for each button class separately in the css file when I'd make just one small change for one of the buttons. I later realized that I can group them in divs, as well as use inheritance (such as ul > li > a) to change the style of more than one button at the same time. I would also organize my css code better in the future so that all the styling I have for different parts of the page will be grouped with each other according to where/what they are (such as grouping the styling for the navbar vs the rest of the page)

It was great working with you all!
- Nicole Bernardo

Olivia Nicole Wissig
Thu 5/21/2020 9:54 PM
To: Ahmad Moussalli; Felipe De Jesus Carmona; Viral Kantilal Amin; Pak Lik Siu; Nicole Bernardo

Hello Team 05,

Below are team self-assessment and contributions:

a) His/her contributions to team project and teamwork (technical and any other) in no more than half a page – point format is OK.

- Supported the front end team with the style and formatting of the website and its contents
- UI interface for the sell/post page
- UI for admin and user dashboards
- Supported the team when meeting deadlines and expectations
- Contributed to github branches and commits,

b) Number of submissions he/she made to github team dev. Branch

Number of commits to develop branch: 8 total (6 under Olivia Wissig, 2 under "oliviawissig")

c) One brief paragraph on main challenges he/she encountered in team project

At first, we decided on HTML as the language of choice, but as the website progressed, we realized we needed a much stronger base code. Pak suggested we use .ejs files for the pages and I was nervous. I did not have experience with the type of file at the time which made me intimidated. However, once I started playing around with it and seeing what it can do, I realized it is not much different than HTML yet has more to offer. I also do not have much experience with back end programming, so I was unfamiliar with some changes and had to ask my team members to explain the code. I felt as if I was a little behind the others, but they were very supportive and were patient with me as I learned along the way.

d) One brief paragraph on what would he/she do better next time based on what was learned in the class about SE management and processes

I would get more involved with the back end process. I chose to do front end since I am familiar and somewhat comfortable with it. However if I have a second chance, I would want to broaden my knowledge and learn something that I do not know. I am a quick learner, and a visual one, so I would hope I could learn along the way without slowing my team down.

I had a great semester with you all, take care and stay safe!

Pak Lik Siu <pakliksiu321@gmail.com>
Thu 5/21/2020 9:45 PM
To: Nicole Bernardo
Cc: Ahmad Moussalli; Felipe De Jesus Carmona; Viral Kantilal Amin; Olivia Nicole Wissig; Pak Lik Siu

Hi Team 05,
Contributions
to team project and teamwork :
-
  My contribution to the team
  is handling most of the back end stuff such as setting cloud database, cloud deployment , creating features for the website.

  o
    implementing image upload
    feature, user/admin authentication(also keeping the user log in through cookie) , search function(using sql query), admin approve/decline feature, messaging owner feature, download content feature.

  o
    helps teammates to set up
    their own/ cloud database for team development

Number
of submissions he/she made to github team dev. branch:
-
  made 40 submissions github
  team dev. Branch

One
brief paragraph on main challenges he/she encountered in team project:
-
  The main challenges that I
  encountered in this team project is the setup of a Cloud database, Cloud deployment and how to handle the store image in a SQL database instead of noSQL. It took me days to fully understand how to set up connection between the online database to our server node js. Moreover, for mysql, image can only store in Binary which make it much hard to show the image in the client view because I have to convert the binary number back into a actual image

Felipe De Jesus Carmona
Thu 5/21/2020 10:05 PM
To: Pak Lik Siu <pakliksiu321@gmail.com>; Nicole Bernardo
Cc: Ahmad Moussalli; Viral Kantilal Amin; Olivia Nicole Wissig; Pak Lik Siu

Hello Team 05,

Below are team self-assessment and contributions:

a) Contributions
    I organized front-end meetings as well as came up with tasks and divided them up within the front-end team. I also worked on the login and registration UI portion of the website. I also helped review milestones to make sure they were error free.

b) Number of submissions he/she made to github team dev. Branch

About 17 commits in the develop branch.

c) One brief paragraph on main challenges he/she encountered in team project

Some challenges I encountered at the beginning of the project was being able to accurately design the css and html for the login/registration pages based on the pages we designed on figma. Also being able to make some of the items on login/registration responsive was a small issue but fixed it quickly.

d) One brief paragraph on what would he/she do better next time based on what was learned in the class about SE management and processes

I would probably try and work on different front-end tasks I did not work on, as well as get involved with some back-end tasks. Being able to work on various parts of a project would benefit me in gaining more knowledge in different areas.

Was great working with you alll,
-Felipe Carmona

Viral Kantilal Amin
Thu 5/21/2020 11:29 PM
To: Felipe De Jesus Carmona; Pak Lik Siu <pakliksiu321@gmail.com>; Nicole Bernardo
Cc: Ahmad Moussalli; Olivia Nicole Wissig; Pak Lik Siu

Hello Team 05,

Below are team self-assessment and contributions:

a) My contributions

- Gathered Boilerplate code and assembled according to our Team Stack so that the team can start at Milestone 0.
- Setup git repo and applied security measures to protect master branch and everyone else code.
- Setup AWS Educate account to host the website on Amazon.
- Helped team figure out how to work with git and how to commit professionally.
- Setup Git flow for smooth team work.
- Reviewed each Pull Requests and merged it according to the git flow to keep the team on track.

b) Number of submissions he/she made to github team dev. Branch

About 6 commits on the development branch (excluding feature branches)

c) One brief paragraph on main challenges he/she encountered in team project

Working in teams can be a bit challenging specially when everyone has a different background and different coding style. But the team leaders managed it pretty well and kept all in the same page. I helped the team lead on keeping everything organized on github as I am a github master. The biggest challenge I faced was deploying our code on AWS. Which I overcame with the help of other team members.

d) One brief paragraph on what would he/she do better next time based on what was learned in the class about SE management and processes

Next time I would stress on more detailed requirement gathering and spend more time on non functional requirements and try to be more organized so we are done ahead of the deadline so the team has a time to better review

It was pleasant working with you,