SW Engineering CSC648/848 Fall 2022

SFSU MEDIA STORE

TEAM 3

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Revisions History

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1) EXECUTIVE SUMMARY:

When we joined this college, we needed to get access to the previous year recordings of the courses we had enrolled for. We went and checked on iLearn which is a go to platform for any course related contents. But unfortunately, it contains the content of the present semester only. We then had to ask my peers in college to share any recordings they had. In between all this painful process, we felt there was the need for a platform where any student could get access to any recordings for the courses they were looking for, as well as any other digital media useful for studying, without troubling others. This is when we decided to develop and launch a web platform “SFSU Media Store” for sharing media across SFSU students and faculty. Not only this, users can buy and sell any kind of digital media such as images, audios, videos, etc. on our web platform. It will be like a One Stop Store for all SFSU students and faculty to gain access to digital media. Our application will make searching for tutorials and class recordings/ presentations a lot easier since it will all be in one place. It will make the hassle of trying to find different information easier.

SFSU Media Store will let students and faculty browse through numerous digital media present on the web platform. Users can directly download the content if it is available for free. In case the content, is not available for free, the user can contact the seller by sending them a message via the application itself. To discuss moving forward with downloading the contents. Any student or faculty can upload the content and on submission they need to register on the application. To make sure no unsafe content goes live to the audience, every uploaded item will need the post approval for publishing from the admin.

To make browsing simpler, users will be provided with a search bar wherein they can search by title, course number, class, etc.. Also the contents on the web application are listed in different categories, which will help users navigate to the content easily. Users can also rate the content which will help other users in making wise decisions about buying that content in the future. Also, there will be a like and comment button on each content on the application. This will give users ideas on what topics are getting popular at SFSU.

We are a group of 6 SFSU students who started this Startup as a part of one of our course projects. Two of us are graduate students whereas the others are in their senior year of undergrad. Our expertise lies in diverse skills ranging from backend technologies like Python and Flask to front end technologies like Bootstrap and ReactJS. We have divided our group into three frontend engineers and three backend engineers. This way we have an equal work distribution within our group. Not only that but some have a lot of experience in one area but are curious about the other so this project gives us the opportunity to learn and explore different technologies. We also get to strengthen the skills we already have and create something unique.

2. PERSONAE AND MAIN USE CASES:

A. Jane - an SFSU student

Photo source : Unsplash

About Jane	Goals and senarios
• Computer Science student at SFSU • Has a busy class schedule • Sufficiently familiar with web applications, and sometimes uses various applications to buy the products she needs online, or download books or videos for her classes. • She is not too patient and often needs access to her purchased product (class material) immediately.	• She has an assignment deadline by tonight. • She is looking for the class recordings she missed.

B. John - a faculty at SFSU

Photo source : Unsplash

About John	Goals and scenarios
● He teaches multiple classes and has a busy schedule ● He is not very familiar with web applications and only has some basic skills ● He is not very patient with learning how to navigate through a website	● He wants to make his class recordings to be available to all students of SFSU. ● He also has some eBooks which he wants to sell to SFSU students.

C. Jim - a student at SFSU

Photo source : Unsplash

About Jim	Goals and senarios
• He is a senior year student • He is very busy preparing for full time job interviews • He has basic web app skills • He is not very patient.	• He is looking for free resources for interview preparation.

D. Joe - admin (moderator)

Photo source : Unsplash

About Joe	Goals and senarios
● This is his job and he allocates a certain amount of time just for his admin tasks ● He has good knowledge of web applications ● He has good knowledge of database.	● He is looking for a database moderator role in a startup/company.

Use cases:

1. Instructor posts a media on the website

John is an **instructor** at SFSU. He uses our web app to **post** the class material (lecture videos, books, pdfs, etc.) for his students. These class materials are to be used only by SFSU students. He uses the **upload** function to select and upload the materials. He will choose which class and subject the material should be categorized as, and he will enter the price for each material. On submission he will then be asked to register or log in (if he has

previously made an account on our web app) using his SFSU email or ID. The upload will be then pending approval from the website **admin** (moderator). John will see the message that his post is pending for approval.

2. Student contacts the seller to buy paid item

Jane is a **student** at SFSU. She uses our web app to find and buy the media she needs. She browses the website and looks at the different media. She uses the **search** function to search for a certain SFSU class or a specific SFSU product. She can choose the category of the product when searching. Once she finds the product and clicks purchase she will be asked to **register** or **login** (if she has previously made an account on our web app) using her SFSU email or ID. She will then be able to **send a message** to the seller with her contact details and will wait for seller to contact her via the contact info she provided in the message.

3. Student posts the item

Jane is a **student** at SFSU, she is part of a student organization. She creates resources and media for this student organization. She uses our web app to share these media with other SFSU students, faculty or staff. She uses the **post** function to select and upload the media. She will choose the category and subject of the media, and she will enter the price for it. After clicking upload she will then be asked to register or login (if she has previously made an account on our web app) using her SFSU email or ID. The upload will be then pending approval from the website admin (moderator). Jane will see the message that her post is pending for approval.

4. Admin approves / denies the upload request

Joe is the **admin** for this web app. He will use **Workbench** to monitor the activity of the website. He approves or denies all the **upload requests** before they are posted on the website. He will **suspend** a user's account if they try to upload inappropriate media more than once or if they don't follow the website guidelines.

5. Student downloads a free item

Jim is a senior year **student** at SFSU. He is preparing for interviews. He **browses** our web app to **search** for free videos available on the topic he is interested in. He attempts to download the content but is prompted to register/ login. He then **downloads** the content he is interested in.

3) LIST OF MAIN DATA ITEMS AND ENTITIES

- Item

  - (title, category, price, description, file)

- Rating
- Comments
- Post_category

  - i.e. audio, video, image

- Messages
- Downloads

- User registration record

- Users

  - see types of users below

Type of users

- Unregistered User

  - a customer who visits the webpage but hasn't registered
  - Viewing permissions
  - Not able to post nor send message

- Registered User

  - a customer who has registered for the web application and can post / upload a media
  - Elevated permissions than unregistered user. Eg: Able to post and send message

- Admin

  - An administrator with different set of permissions than an usual user
  - Has obligation to approve / reject posts before they go live.

4) INITIAL LIST OF FUNCTIONAL REQUIREMENTS

Unregistered users:

1. Shall be able to browse items.
2. Shall be able to search items using media categories.
    1. Can search media using a category menu that will present media based on the type of content the media shows.
3. Shall be able to view item details.
4. Shall be able to search media using the author's name.
    1. The first and/or last name of an author can be searched.
5. Shall be able to search media using the item's title, class number, etc..
6. Shall be able to view comments on posts.
7. Shall be able to view likes on posts.
8. Shall be able to view ratings on posts.
9. Shall be able to preview media.
10. Shall be able to register to the website.

Registered Users

All of the above functionalities of unregistered users plus the following:

11. Shall be able to download the free item.
12. Shall be able to login into their personal account.
13. Shall be able to contact sellers to buy paid media item.
13. Shall be able to post an item.
14. Shall be able to delete item.
15. Shall be able to edit item.
    1. Users will be able to change the title of published media.
16. Shall be able to delete their account.

17. Shall be able to post ratings on item.

18. Shall be able to change their personal account settings.

    1. This includes changing: password, user details.

19. Shall be able to comment on other user's posts.

20. Shall be able to like other user's posts.

Admin:

22. Admin is required to approve the posts (before they go live) which are appropriate.

23. Admin shall be able to reject the posts (from going live) which are inappropriate.

24. Admin shall have access to all registered users' data.

25. Admin shall have the permission to suspend registered users accounts.

26. Admin shall be able to view users' data (Data including media downloaded, media rating given, etc.)

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

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. All or selected application functions must render well on mobile devices

4. Data shall be stored in the database on the team's deployment server.

5. No more than 50 concurrent users shall be accessing the application at any time

6. Privacy of users shall be protected

7. The language used shall be English (no localization needed)

8. Application shall be very easy to use and intuitive

9. Application should follow established architecture patterns

10. Application code and its repository shall be easy to inspect and maintain

11. Google analytics shall be used

12. No e-mail clients shall be allowed. Interested users can only message to sellers via in-site messaging. One round of messaging (from user to seller) is enough for this application

13. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in UI.

14. Site security: basic best practices shall be applied (as covered in the class) for main data items

15. Media formats shall be standard as used in the market today

16. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development

17. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Fall 2022. For Demonstration Only" at the top of the WWW page nav bar. (Important so as to not confuse this with a real application).

6) COMPETITIVE ANALYSIS

	Facebook Market Place	Amazon	Ebay	Etsy	Our Future Product
Text Search	+	++	+	++	+
Boolean Search	+	+	+	+	+
Browse	+	++	+	++	+
Download	-	+	-	+	++
Digital Media Variety	-	+	-	+	++
Messaging	++	-	+	++	+

+ feature exists; ++ superior; - does not exist

Looking at our competitors, our planned advantages is that our product will be geared towards SFSU students, by giving an option to search using class number as well. It will be fully digital, i.e. we will be supporting all kinds of digital media ranging from audio, videos, images, etc.. Users will be able to buy, sell, and share digital media. Users will also have the ability to download any free material and message sellers for buying the paid content. Looking at our competitors such as Facebook market place and Ebay, those are features they lack in. Some companies such as Amazon and Etsy have those features but not at the level that our future product will be at. That being said, we do want to get inspiration from their browsing abilities and their search abilities.

7) HIGH LEVEL SYSTEM ARCHITECTURE AND TECHNOLOGIES USED:

Sever Host: Amazon AWS

Operating System: Ubuntu 16.04 Server

Database: MySQL

Web Server: NGINX 1.12.2

Server-Side Language: Python 3

Additional Technologies: Web Framework: Flask , Bootstrap

IDE: PyCharm and VSCode,

Web Analytics: Google Analytics

8) TEAM & ROLES

Member Name	**Role**
Himani Varshney	Team Lead, Document Master, Back-end developer
Donnovan Jiles	Back-end Lead
Olimpia Aguillon	Front-end Lead
Josef Fiedler	Github Master, Back-end developer
Yasaman Pakdel	Front-end developer
Robert Peter Swanson	Front-end developer

9) CHECKLIST

· So far all team members are engaged and attending ZOOM sessions when required - **On Track**

· Team found a time slot to meet outside of the class - **Done**

· Back end, Front end leads and Github master chosen - **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 – **On Track**

· 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.) – **On Track**