I Visualize You

-Software Design Document-

Team Name: Passion Developers

Product Manager: Seonghoon Park   seonghoon.park@stonybrook.edu
Lead Programmer: Hyunsoo Kim   hyunsoo.kim@stonybrook.edu
Product Owner: Junghun Park   junghun.park@stonybrook.edu
Designer: Hamin Lim   hamin.lim@stonybrook.edu

1 Introduction

1.1 Product Description

Currently, IVY's contents are being managed in their blog and Instagram platforms. Users directly access the blog, Instagram, or a hardcopy magazine to see IVY's activities. Each platform has different types of content. Since individual platforms have unique content, users have to visit separate platforms to go through all of IVY's activities which can be inconvenient. The biggest problem with IVY's current content management system is that it is fractured into various platforms, making it hard for our users to be engaged with the content.

The primary users involved in the operation of this web application will be the administrators and visitors. The administrators of the application will have to be an authorized member of IVY, responsible for updating and maintaining contents created by IVY. The users are those that either make casual visits to the website, or those that visit the web page to view the magazines they purchased.

This web application will provide IVY four major features. The administrators will be able to upload their new projects into the Portfolio page, accessible to all users. Administrators will be able to track where the users came from through the traffic analysis feature. An administrator can manage user information through the user management feature. Online virtual magazines will be uploaded by the administrators and will only be accessible by authenticated users.

1.2 Scope

For this project, the goal is for users to easily access all the contents created by IVY' club through an integrated webpage. The users can check not only blogs and online magazines but also any progression in the form of an album in the "Portfolio" section. This webpage is limited to promote IVY Club- it will not be able to support other purposes or usages. It restrictedly will not support uploading or editing Blog postings through the website, since IVY administrators want to use embedded Medium.com to upload postings for maximum exposure of it. The webpage will be supported through Web Engines such as Chrome, Firefox, Safari, etc. It is strongly recommended to use Laptops and Desktops to explore the webpage.

1.3 Users

Characters	General Characteristics
Visitors	Visitors are those who visited the website through Instagram or Medium Blog postings, showing interest in what IVY does.
Users	Users are more involved visitors. They are those that want to get regular updates from IVY and to explore IVY's "Portfolio". They are also potential magazine buyers.
Purchase Users	Purchase users are people who purchase the magazine and are willing to read PDF versions of IVY's online magazine.
Administrator	The administrator of IVY. Uploads or edits the "Portfolios" and "Magazines". Sends updates to the users' email accounts and manages users

- Disabilities: Since the Website is presented with visual objects, users with visual disabilities will not be able to use the Website to its full extent.
- Technical Difficulties: High definition images and contents will be shown on the webpage, so a low-quality network connection will make it hard to display the contents. Also, web engines are essential to visit the webpage.

1.4 User feedback

Once we receive feedback from the mock-up version of the application, improvements will be made based on the feedback. Since we are working with an FIT club, it will be helpful if our team gets feedback from FIT students. We will ask the supervising professor of IVY and its members to send the survey form to FIT students. Stakeholder - Suggested embedding their Medium.com blog page, which would be more flexible for posting the newsletters on Medium.com.

1.5 Existing alternatives

Medium - https://medium.com/

      Medium is a website that helps users build their blogs. It is useful to upload posts with texts and photos like an article. However, Medium is not suitable for posting portfolios, which are mainly collections of photos. Moreover, it cannot distinguish users who purchased magazines or not.

Instagram - https://www.instagram.com/

      Instagram has its strength in advertisement and accessibility. However, it is hard to post articles with long texts; also, there is a maximum capacity of photos per post. Instagram makes it hard to manage portfolios, magazines, and articles at once.

1.6 Definitions

Album - Album is collection of pictures with title and short caption that are the output of the IVY's project

Benchmark - A benchmark is a status in the development of our web application. Each benchmark contains the implementation of a set of functionalities.

FIT - Fashion Institute of Technology

IVY - I Visualize You, student club of FIT Songdo campus

JPEG - Stands for "Joint Photographic Experts Group". It is a standard image format for containing lossy and compressed image data

Mockup - A Mockup is a scale or full-size model of a design or device, used for teaching, demonstration, design evaluation, promotion, and other purposes.

Modal - A modal is a graphical control element subordinate to an application's main window.

Navbar - Navbar means navigation bar that is a user interface element within a webpage that contains links to other sections of the website.

PDF - Stands for "Portable Document Format." The PDF is a file format developed by Adobe in 1993 to present documents, including text formatting and images, in a manner independent of application software, hardware, and operating systems.

Portfolio - Portfolio is the page that contains albums.

Stakeholder - A stakeholder is a party that has an interest in a company and can either affect or be affected by the business. The primary stakeholders in a typical corporation are its investors, employees, customers, and suppliers.

Thumbnail - A thumbnail is a compressed preview image of the original that is used as a placeholder.

UI - Stands for "user interface." The user interface is the graphical layout of an application.

1.7 References

Flippable PDF magazine (Issuu):
https://issuu.com/morrismedianetwork/docs/hawaii_royalshoppingcenter_2019_02

2. Requirements

2.1 Functional Requirements

-Visitors can access the Home page.
-Visitors can access the About page to view information about IVY.
-Visitors can access the Blog page, where Blog postings by IVY from Medium.com will be embedded for view..
-Visitors can access the Magazine page.
-Visitors can access the Portfolio page.
-Visitors can access the Contact Us page.
-Visitors can access the blog on Medium.com through a hyperlink in the Blog page.
-Visitors can send the email and ask additional questions through the contact section.
-Visitors can sign up to create an account for this web application.

-Visitors can sign in with a previously created account.
-Users can view albums of activities in the Portfolio page.
-Users can fill out a form to request for the purchase of the magazine on the Contact Us page.
-Users can sort or filter the albums by date, name, or number of views.
-Users can view their personal information.
-Purchase users can read the magazine on the platform provided by the web application.
-The Administrator can login with admin ID.
-The Administrator can access the Manage Portfolio page.
-The Administrator can access the Manage Magazine page.
-The Administrator can access the Manage User page.
-The Administrator can access the Manage Statistic page.
-The Administrator can upload a number of JPEG image files as a single project with a title and short caption in the Portfolio page.
-The Administrator can edit a portfolio in each portfolio album.
-The Administrator can view statistics about the webpage, like the number of users, amount of purchases per magazine, or the number of accesses to each portfolio.
-The Administrator can upload pdf files of new magazines, which will then be converted into flippable images.
-The Administrators can edit magazines by changing uploaded pdf files, title, and description in the web application.
-The Administrators can authenticate users' access to magazines once they confirm a transaction.
-The Administrators can search the user by name or email address in the Manage User page.

2.2 Use case diagram

Index	UI region	Use Case
2.1	Navbar	Access home page
2.2	Navbar	Access about page
2.3	Navbar	Access blog page
2.4	Navbar	Access magazine page
2.5	Navbar	Access portfolio page
2.6	Navbar	Access contact us page
2.7	Blog page	Access blog on Medium.com

2.8	Contact Us page	Send email
2.9	Portfolio Page	View album
2.10	Sign Up modal	User Sign Up
2.11	Sign In modal	User Sign In
2.12	Contact-Us page	Make purchase request for the online magazine
2.13	Portfolio page	Filter the albums
2.14	My Info page	View personal information
2.15	Magazine page	Read Purchased Magazine
2.16	Sign In modal	Administrator sign in with Admin ID
2.17	Admin Navbar	Access Manage Portfolio page
2.18	Admin Navbar	Access Manage Magazine page
2.19	Admin Navbar	Access Manage User page
2.20	Admin Navbar	Access Manage Statistics page
2.21	Manage Portfolio page	Upload portfolio
2.22	Manage Portfolio page	Edit portfolio
2.23	Manage Statistics page	Manage Statistics
2.24	Manage Magazine page	Upload PDF magazine file
2.25	Manage Magazine page	Delete magazine file
2.26	Manage User page	Authenticate user to read magazine
2.27	Manage User page	Search user by email

2.3 Use cases

Use Case 2.3.1: Access about page

Use case:	Access home page

Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open home page
Preconditions:	Visitor is exploring other pages
Trigger:	The visitor clicks IVY logo on the navbar
Scenario:	• Visitor is viewing the Portfolio page • Visitor clicks home on the navbar • Visitor views homepage that shows 3 thumbnails of portfolios with highest views
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to view home page
Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.2: Access about page

Use case:	Access about page
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open About page
Preconditions:	The application has been started or the Visitor is exploring other pages
Trigger:	The visitor clicks About on the navbar
Scenario:	• Visitor is viewing the Portfolio page • Visitor clicks About on the navbar • Visitor views About page that has information about club IVY
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to view About page
Open Issues:	Font size, style, and location of link should be finalized by team

Use Case 2.3.3: Access blog page

Use case:	Access Blog page
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open Blog page
Preconditions:	The application has been started or the Visitor is exploring other pages
Trigger:	The visitor clicks Blog on the navbar
Scenario:	- Visitor is viewing the About page - Visitor clicks Blog on the navbar - Visitor views Blog page that has embedded view of Blog postings by IVY from Medium.com
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to view blog page
Open Issues:	Font size, style, and location of link should be finalized by team

Use Case 2.3.4: Access magazine page

Use case:	Access magazine page
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open Magazine page
Preconditions:	The application has been started or the Visitor is exploring other pages
Trigger:	The visitor clicks Magazine on the navbar
Scenario:	- Visitor is viewing the About page - Visitor clicks Magazine on the navbar - Visitor views Magazine page which will display collections of previous magazines.
Exceptions:	N/A

Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to view Magazine page
Open Issues:	Font size, style, and location of link should be finalized by team

Use Case 2.3.5: Access portfolio page

Use case:	Access portfolio page
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open Portfolio page
Preconditions:	The application has been started or the Visitor is exploring other pages
Trigger:	The visitor clicks Portfolio on the navbar
Scenario:	- Visitor is viewing the Contact-Us page - Visitor clicks Portfolio on the navbar - Visitor views Portfolio page which will display collections of portfolios maintained by the administrator
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wanting to view Portfolio page
Open Issues:	Font size, style, and location of link should be finalized by team

Use Case 2.3.6: Access contact us page

Use case:	Access contact us page
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to open contact page
Preconditions:	The application has been started or the Visitor is exploring other pages
Trigger:	The visitor clicks Contact Us on the navbar

Scenario:	• Visitor is viewing the Portfolio page • Visitor clicks Contact Us on the navbar • Visitor views Contact Us page that can ask question about the club IVY and can make magazine purchase request
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to view contact us page
Open Issues:	Font size, style, and location of link should be finalized by team

Use Case 2.3.7: Access blog on Medium.com

Use case:	Access blog on Medium.com
Primary Actor:	Visitor
Goal in Context:	The visitor wishes to visit blog on Medium.com
Preconditions:	The visitor is viewing embedded blog on Blog page
Trigger:	The visitor clicks Visit Blog button
Scenario:	• Visitor is viewing the Blog page • Visitor clicks Visit Blog button • A new tab is opened and the blog https://medium.com/@ivisualizeyou will automatically be displayed.
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the visitor wants to visit actual IVY's blog
Open Issues:	Button shape, image, style, and location of button should be finalized by team

Use Case 2.3.8: Send email

Use case:	Send email

Primary Actor:	Visitor
Goal in Context:	A visitor wishes to send an email to ask additional questions to the administrators
Preconditions:	The visitor has accessed the contact us page
Trigger:	The visitor clicks on "submit" button in Contact Us form
Scenario:	- The visitor sees a page with "Contact Us" form and "Purchase Request" form - The visitor fills out contents in Contact Us form - The visitor either submits the Contact Us form or exits the page
Exceptions:	There will be minimum requirements in the forms.
Priority:	Expected; this feature is good to have implemented
When Available:	First Benchmark
Frequency of use:	Occasionally performed by willing visitors
Open Issues:	Method to reply back to the user, format of the form.

Use Case 2.3.9: View album

Use case:	View album
Primary Actor:	User
Goal in Context:	A user wishes to view an album inside the portfolio page
Preconditions:	The user has accessed portfolio page
Trigger:	The user clicks on the jpeg file in the chosen album
Scenario:	- The user looks for an album he or she wishes to look through - The user clicks on the album chosen - A collection of jpeg files in the album is displayed - The user chooses a jpeg file to view - The user can look through the images displayed
Exceptions:	Visitors will be prompted to sign in first.
Priority:	Essential; must be implemented

When Available:	First Benchmark
Frequency of use:	Frequently by users
Open Issues:	Layout of image files.

Use Case 2.3.10: User sign up

Use case:	User sign up
Primary Actor:	Visitor
Goal in Context:	A visitor wishes to create an account
Preconditions:	The visitor has accessed the sign up modal
Trigger:	The visitor clicks on "Sign up" button
Scenario:	- The visitor sees a list of forms to fill out - The visitor either fills out the entire form or the minimum requirements of the form - The visitor either decides to sign up for the web application or exits the page
Exceptions:	Visitors will have to use an active email account to sign up
Priority:	Essential; must be implemented
When Available:	First Benchmark
Frequency of use:	Occasionally by visitors
Open Issues:	N/A

Use Case 2.3.11: User sign in

Use case:	User sign in
Primary Actor:	Visitor
Goal in Context:	A visitor wishes to sign in as a user
Preconditions:	The visitor has prompted a sign in modal
Trigger:	The visitor clicks on "Sign in" button
Scenario:	The visitor fills out the email and password

Exceptions:	N/A
Priority:	Essential; must be implemented
When Available:	First Benchmark
Frequency of use:	Very frequently by users
Open Issues:	N/A

Use Case 2.3.12: Make purchase request for online magazine

Use case:	Make purchase request for an online magazine
Primary Actor:	User
Goal in Context:	A user wishes to make a purchase request for an online magazine
Preconditions:	The user has accessed the Contact Us page
Trigger:	The user clicks on "submit" button in "Make Request" form
Scenario:	- The user sees a page with "Contact Us" form and "Purchase Request" form - The user fills out the contents in "Purchase Request" form - The user either places the request or exits the form
Exceptions:	-Visitors will be prompted to sign up first. -Users will have to wait for the administrators to confirm their authentication to view the magazine
Priority:	Essential; must be implemented
When Available:	First Benchmark
Frequency of use:	Frequently by users
Open Issues:	N/A

Use Case 2.3.13: Filter the albums

Use case:	Filter the albums
Primary Actor:	User
Goal in Context:	A user wishes to filter the albums by date, most view, or name.

Preconditions:	The user has login and access the Portfolio page
Trigger:	The user clicks on "filter" button in Portfolio page
Scenario:	● The user clicks on "filter" button in Portfolio page ● The user selects "most views". ● The albums are sorted from highest to lowest views
Exceptions:	-Visitors will be prompted to sign up first.
Priority:	Essential; must be implemented
When Available:	First Benchmark
Frequency of use:	Performed every time a user wants to adjust the way albums are listed
Open Issues:	N/A

Use Case 2.3.14 View personal information

Use case:	View personal information
Primary Actor:	User
Goal in Context:	The user wishes to view the personal information.
Preconditions:	The user need to be logged in and move to My Info page
Trigger:	The user clicks the My Info page.
Scenario:	● User wants to see his or her personal information. ● User signs into the Website. ● User clicks the My Info page. ● User can see his or her personal information.
Exceptions:	N/A
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Performed when the user wants to see his or her personal information
Open Issues:	N/A

Use Case 2.3.15 Read purchased magazine

Use case:	Read purchased magazine
Primary Actor:	Purchase User
Goal in Context:	A purchase user wishes to read the magazine.
Preconditions:	The purchase user needs to be logged in and the administrator needs to confirm the purchase of the user in the User Manage page.
Trigger:	The purchase user clicks Magazine on the navbar and selects the magazine that he or she bought.
Scenario:	- Purchase user wants to read the magazine on the web page. - Purchase user signs into the web page. - Purchase user clicks "Magazine" button from the Nav bar. - Purchase user clicks the magazine that he/she purchased.
Exceptions:	If the user has not purchased the magazine, he won't be able to access it.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Performed when the purchase user wants to read the magazine.
Open Issues:	Visualization of pages being flipped.

Use Case 2.3.16: Administrator sign in with Admin ID

Use case:	Administrator sign in with Admin ID.
Primary Actor:	Administrator
Goal in Context:	An administrator wishes to sign in with Admin ID.
Preconditions:	The administrator has prompted a sign in modal
Trigger:	The administrator clicks on "Sign in" button
Scenario:	The administrator fills out the email and password
Exceptions:	N/A
Priority:	Essential; must be implemented
When Available:	First Benchmark

Frequency of use:	Performed every time the administrator wishes to access the Administrator page
Open Issues:	N/A

Use Case 2.3.17: Access manage portfolio page

Use case:	Access manage magazine page
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to open manage portfolio page
Preconditions:	The administrator must sign in with Admin Id.
Trigger:	The administrator clicks the "manage portfolio" button on the Admin Navbar.
Scenario:	● Administrator is viewing the Manage Magazine page ● Administrator clicks "Manage Portfolio"on the navbar ● Administrator views the "Manage Portfolio" page that has collections of previous portfolios.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time when the administrator wants to manage the portfolios.
Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.18: Access manage magazine page

Use case:	Access manage magazine page
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to open manage magazine page
Preconditions:	The administrator must sign in with Admin Id.
Trigger:	The administrator clicks the "manage magazine" button on the Admin Navbar.
Scenario:	● Administrator is viewing the Manage Portfolio page

	● Administrator clicks "Manage Magazine"on the navbar ● Administrator views the "Manage Magazine" page that has collections of previous magazines.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the administrator wants to manage the magazines.
Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.19: Access manage user page

Use case:	Access manage user page
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to open Manage User Magazine page
Preconditions:	The administrator must sign in with Admin Id.
Trigger:	The administrator clicks the "manage user" button on the Admin Navbar.
Scenario:	● Administrator is viewing the Manage Portfolio page ● Administrator clicks "Manage User"on the navbar ● Administrator views the "Manage User" page that shows information about the users.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the administrator wants to manage the users.
Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.20: Access manage statistics page

Use case:	Access manage statistics page
Primary Actor:	Administrator

Goal in Context:	The administrator wishes to open manage statistics page
Preconditions:	The administrator must sign in with Admin Id.
Trigger:	The administrator clicks the "manage statistics" button on the Admin Navbar.
Scenario:	- Administrator is viewing the Manage Portfolio page - Administrator clicks "Manage Statistics"on the navbar - Administrator views the "Manage Statistics" page that displays statistics about the website.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used every time the administrator wants to view statistics of the website.
Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.21 Upload portfolio

Use case:	Upload portfolio
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to upload the portfolio
Preconditions:	The administrator has to sign in with its admin ID and move to the Manage Portfolio page.
Trigger:	The administrator clicks on the "Add" button to upload portfolio pictures.
Scenario:	- Administrator clicks the "Add" button in the "Manage Portfolio" page. - Upload page comes up. - Administrator fills out the form. - Administrator clicks "Upload" button.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used when the portfolio has been made. Not used frequently.

Open Issues:	IVY logo, style, and location of link should be finalized by team

Use Case 2.3.22 Edit portfolio

Use case:	Edit portfolio
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to edit the previous portfolios.
Preconditions:	The administrator has to sign in with its admin ID and move to the Manage Portfolio page.
Trigger:	The administrator clicks the edit button in the Manage Page of portfolio section.
Scenario:	- Administrator clicks the "Edit" button in the Manage Portfolio page. - Administrator edits "caption" and removes redundant pictures from the selected portfolio. - Administrator clicks the "Upload" button.
Exceptions:	Administrator not signed in with Admin ID.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	Used when error occurs in the file. Not used frequently.
Open Issues:	N/A

Use Case 2.3.23 Manage statistics

Use case:	Manage statistics
Primary Actor:	Administrator
Goal in Context:	Administrator wishes to view statistical information about the number of accesses or purchases about the web page.
Preconditions:	The administrator has to sign in with its admin ID and move to the Mange Statistics page.
Trigger:	The administrator clicks on the "Manage Statistics" button on the Admin

	Navbar.
Scenario:	- User has been moved to the "Manage Statistics" page - User can see information about the following - Number of users with an account - Number of users who have visited IVY Magazine - Bar graph of the amount of visitors on daily, monthly, and yearly basis - Bar graph of the amount of purchases made per each magazine in the "Magazine" page - Bar graph of the number of accesses made to each portfolio in the "Portfolio" page
Exceptions:	Access to this page can only be initiated from the "Admin Page".
Priority:	Expected; this feature is good to have implemented
When Available:	Second benchmark
Frequency of use:	Used once in a week or month to track the statistics of the users.
Open Issues:	Types of graphs to display necessary information; kinds of information to display.

Use Case 2.3.24 Upload PDF magazine file

Use case:	Upload PDF magazine file
Primary Actor:	Administrator
Goal in Context:	The administrator uploads the magazine in the magazine page.
Preconditions:	The administrator has to sign in with its admin ID, move to the Manage Magazine page, and click the add button.
Trigger:	The administrator clicks on the upload button in the Upload Page.
Scenario:	- A page with upload magazine form comes up. - Administrator fills out the title and description. - Administrator uploads the thumbnail image and pdf file for magazine. - Administrator clicks the upload button.
Exceptions:	Only pdf files can be uploaded. Upload button will not be enabled if there is no attached file.
Priority:	Essential, must be implemented
When Available:	First benchmark

Frequency of use:	Used every 6 months because IVY produces the magazine every 6 months.
Open Issues:	Style, design, and structure of the form have to be discussed with the UI designer. Maximum volume for the pdf file has to be discussed with the team.

Use Case 2.3.25 Delete magazine file

Use case:	Delete magazine file
Primary Actor:	Administrator
Goal in Context:	The administrator wishes to delete the magazine file.
Preconditions:	The administrator has to sign in with an admin ID, move to the Manage Magazine page, and click the delete button.
Trigger:	The administrator clicks the delete button next to the magazine.
Scenario:	- Administrator finds the magazine to be deleted. - Administrator clicks the delete button. - The magazine is deleted
Exceptions:	Administrator deletes the wrong magazine.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	When the magazine file contains the error. Not frequent. When the administrator is willing to delete the magazine that is too old.
Open Issues:	Location and style of delete button have to be discussed with the UI designer.

Use Case 2.3.26 Authenticate user to read magazine

Use case:	Authenticate user to read magazine
Primary Actor:	Administrator
Goal in Context:	The administrator gives access to read magazines to purchase users.
Preconditions:	The administrator has to sign in with an admin ID, move to the User Manage Page, and search the user who purchased the magazine.

Trigger:	The administrator checks the purchased button of the user in the User Manage Page.
Scenario:	- Administrator clicks on the user name - User information page comes up - A list of magazines with checkboxes next to them are displayed. - Administrator checks the checkbox named "2020 fall magazine" in the user information page. - Administrator clicks apply button - User is then allowed to open and view "2020 fall magazine"
Exceptions:	Administrator checked the wrong magazine checkbox. Administrator did not click the apply button after making a change.
Priority:	Essential, must be implemented
When Available:	First benchmark
Frequency of use:	When the purchase of the magazine has been made.
Open Issues:	Location, style of the checkbox have to be discussed with the UI designer.

Use Case 2.3.27 Search user by email

Use case:	Search user by email
Primary Actor:	Administrator
Goal in Context:	The administrator searches and finds the user by email address.
Preconditions:	The administrator has to sign in with its admin ID, move to the User Manage page.
Trigger:	The administrator enters the user's email address in the search bar and clicks the search button.
Scenario:	- Administrator enters the user's email address in the search bar - Administrator clicks search button - The information of user that matches the search field is displayed
Exceptions:	Administrator enters a non-existent email address.
Priority:	Expected; this feature is good to have implemented
When Available:	Second benchmark
Frequency of use:	When the administrator authenticates the user to read a magazine. When the administrator is willing to check the user's personal information.

	When the administrator is willing to check the user's purchase history
Open Issues:	Style of search button, and location of the search bar have to be discussed with the UI designer.

3. System Architecture

3.1 Overview

3.1.1 Component of the system

	Languages	Framework
Front-end	Html 5, CSS 4, Javascript ES6	DJANGO(v3.1.1)
Back-end	Python 3(v3.6.*)	
Database	PostgreSQL(v12.0)	

Django: Our team chose Django Framework because our Web application focuses majorly on the Admin side of the functions. Django Framework offers easy access and management of the contents on the Front-end of the Web application for the administrators.

PostgreSQL: PostgreSQL uses RDBMS(Relational Database Management System) and many Django users use PostgreSQL conventionally so our team decided to use PostgreSQL for the database.

HTML, CSS, Javascript: Most commonly used languages to develop web pages CSS controls the styles of the web pages and Javascript controls the functions for the web pages.

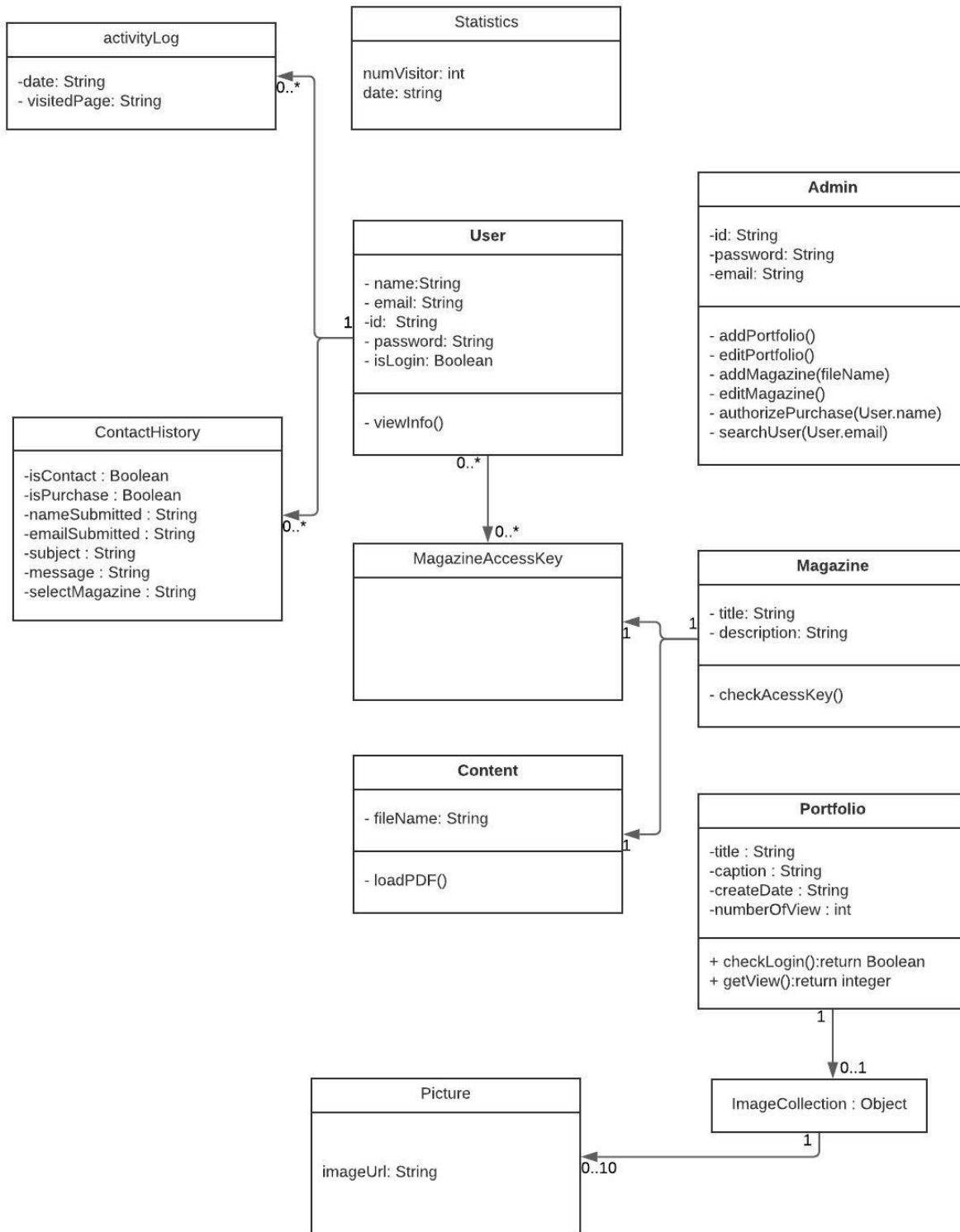Python: Django Framework is driven by Python.

3.1.2 Third Party Components

1. Bootstrap frontend framework (v4.5)
   - Link: https://getbootstrap.com/

- Bootstrap provides CSS pre-processing service and bundled Javascript plugins. Those features enable developers to not waste time on looking for numerous different plugins across the web and to build an application in a time-saving manner.

2. django-flipbook (v0.3.7)
    - Link: https://pypi.org/project/django-easy-pdf/
    - Django flipbook is required to render the magazine pdf file to users. This library will create a flippable pdf file.

3. Django-filter (v2.4.0)
    - Link: https://django-filter.readthedocs.io/en/stable/guide/install.html
    - Django filter is a required library to implement search functions in this web application. Search function is required for user search and portfolio search.

4. Retainable (no version information)
    - Link: https://www.retainable.io/embed-your-medium-blog
    - Retainable is an open source that helps embedding medium blog contents into a web application.
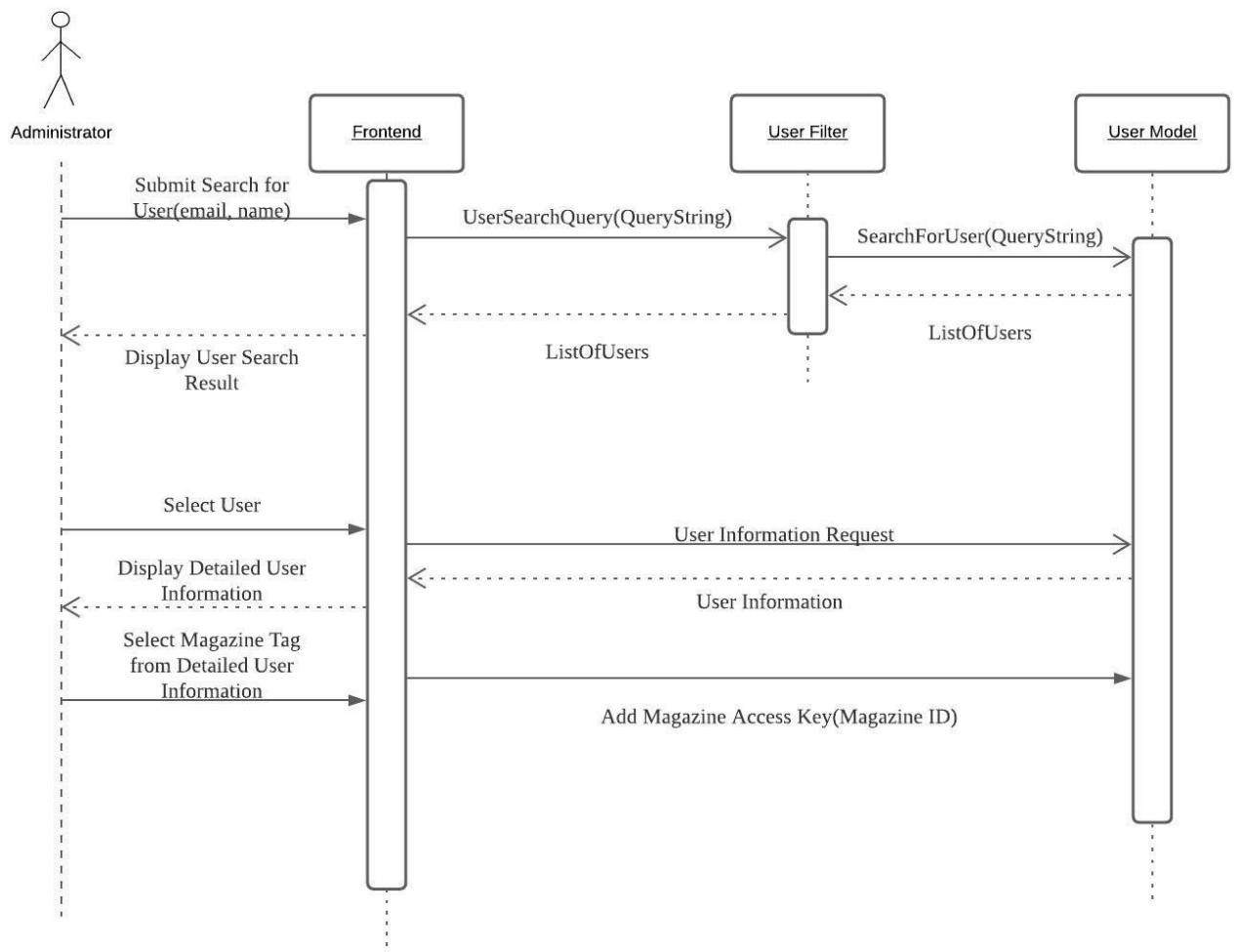
3.1.3 Software Design patterns

1. Model-View-Template architecture
    a. View presents the user interface with functionalities
    b. Model presents RDBMs database structure
    c. Template presents what users see in a web browser.

3.2 UML Class Diagram

activityLog

-date: String
- visitedPage: String

0..*

Statistics

numVisitor: int
date: string

Admin

-id: String
-password: String
-email: String

- addPortfolio()
- editPortfolio()
- addMagazine(fileName)
- editMagazine()
- authorizePurchase(User.name)
- searchUser(User.email)

User

- name:String
- email: String
-id: String
- password: String
- isLogin: Boolean

- viewInfo()

1

0..*

ContactHistory

-isContact : Boolean
-isPurchase : Boolean
-nameSubmitted : String
-emailSubmitted : String
-subject : String
-message : String
-selectMagazine : String

0..*

0..*

MagazineAccessKey

1

1

Magazine

- title: String
- description: String

- checkAcessKey()

Content

- fileName: String

- loadPDF()

1

Portfolio

-title : String
-caption : String
-createDate : String
-numberOfView : int

+ checkLogin():return Boolean
+ getView():return integer

1

0..1

ImageCollection : Object

1

Picture

imageUrl: String

0..10

3.3 UML Sequence Diagrams

3.3.1 Administrator gives magazine access key to user

3.3.2 User opens and views magazine
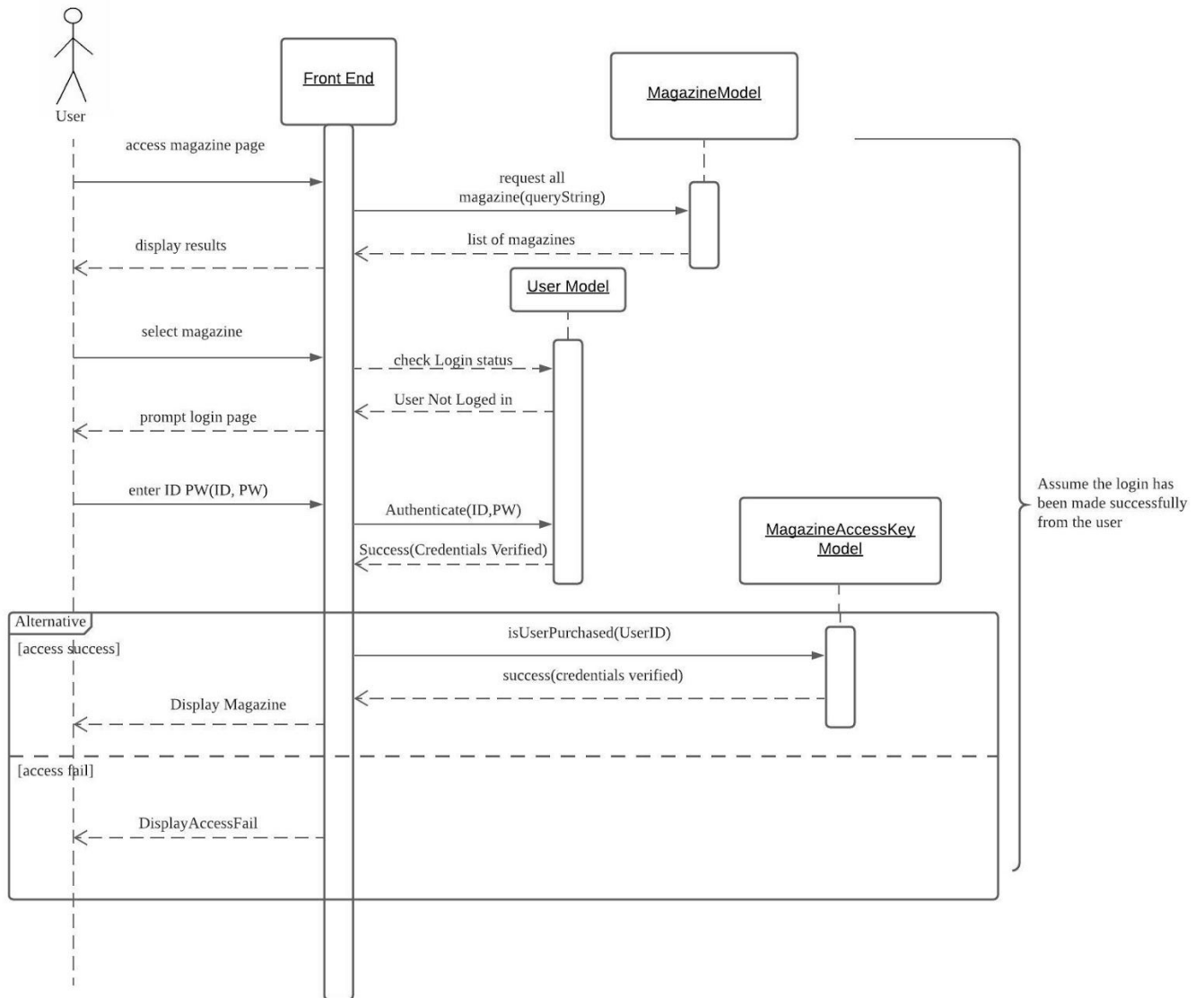
3.4 Deployment

Amazon EC2

- Since the GItHub student Developer Pack provides free Amazon Web Services, our web application will be deployed on the Amazon Elastic Compute Cloud, known as Amazon EC2, which provides secure and resizable compute capacity in the cloud.
- Link: https://aws.amazon.com/ec2/?ec2-whats-new.sort-by=item.additionalFields.postDateTime&ec2-whats-new.sort-order=desc

3.5 Code Conventions

- Code conventions in this web application will follow those in the PEP8 Style. The code convention will be checked with the style checker Pylint (version 2.7).
- Link: https://www.python.org/dev/peps/pep-0008/

4. Schedule

Abbreviation of name of each team member:
HK - Hyunsoo Kim
SP - Seonghoon Park
JP - Junghun Park
HL - Hamin Lim

Tue, Oct 27, 2020 milestone 1
- **Database modeling(Prerequisite: None)**
    - **HK, SP, JP and HL**
- **Rendering basic user information to Templates(Prerequisite: Database modeling)**
    - **HK**
- **Admin panel setup(Prerequisite: Database modeling)**
    - **JP**
- **User Registration and Login Authentication(Prerequisite: Database modeling)**
    - **HL SP**

Tue, Nov 3, 2020 milestone 2
- **User Role Based Permissions and Authentication on pages of the web application(Prerequisite: User Registration and Login Authentication, Database modeling)**
    - **SP**
- **User Password Reset by Email(Prerequisite: Database, User Registration and Login Authentication)**
    - **SP**
- **Filter functionalities on the Portfolio page(Prerequisite: Database modeling)**
    - **JP**
- **CRUD functions on Portfolio page(Prerequisite: Database modeling)**
    - **HL, HK**

Thu, Nov 12, 2020 milestone 3
- **Update based on user feedback (Prerequisite: milestone 1, milestone 2)**
    - **JP, HK**
- **CRUD functions on the Magazine page(Prerequisite: Database modeling)**
    - **HL, HK**
- **Polishing the design of the front-end components(Prerequisite: milestone 1, milestone 2)**
    - **JP**
- **Email Functionality added to Contact-Us page(Prerequisite: Database modeling)**
    - **SP**

Tue, Nov 24, 2020milestone 4
- **Deploying to AWS Server(Prerequisite:milestone 1,2,3)**
    - **HL, JP**
- **AWS Postgres Connection(Prerequisite:milestone 1,2,3)**
    - **HK SP**

5. Contributions

Hamin Lim - UML Class Diagram, UML Sequence Diagram, Overview

Hyunsoo Kim - Deployment, Overview, Schedule

Junghun Park - UML Class Diagram, UML Sequence Diagram, Overview, Schedule

Seonghoon Park - UML Class Diagram, UML Sequence Diagram, Code Convention