

Milestone 5: Final Project Portfolio

Course: CEN 4010 - Principles of Software Engineering

Semester: Summer 2020

Team Name: FunkyTech

Team Number: 7

Project/Application Name: Gather+

Project URL:

https://lamp.cse.fau.edu/~cen4010s2020_g07/GatherPLUS/

Team Members

- **Michael Resendes:** mresendes2017@fau.edu | Product Owner
- **Brent Werne:** bwerne2018@fau.edu | Back-End Developer
- **Betsy Kuruvila:** bkuruvil@fau.edu | Front-End Developer
- **Michael Simon:** msimon2015@fau.edu | Scrum Master

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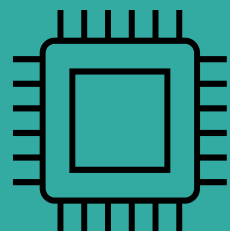


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Peer Evaluation

We, the members of group seven, agree to the following percentage distribution for our involvement in the Milestone 5 assignment.

Michael Simon (25%) helped capture the “Google Analytics” aspect of this 5th milestone.

Brent Werne (25%) recorded the “Technical Overview” section of the video demonstration and helped make final changes to the Gather+ application.

Betsy Kuruvila (25%) recorded the “Introduction”, “Project Exhibition”, and “Self-Review” sections of the video demonstration and helped make final changes to the Gather+ application.

Michael Resendes (25%) recorded the “Product Summary” and “Future Features” section of the video demonstration and served as scribe for the M5 document.

Product Summary

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The name of our product is called Gather+. It is a web-application centered around the idea of coming together in a time where physical distancing is required due to COVID-19, and social interactions have become more important than ever. Gather+ is a social media website that brings people together based on common interests. The content of Gather+ will be divided between its four main hubs: Books, Podcasts, News and Games. These hubs will serve as centers for a variety of topics that are intended to help build camaraderie among Gather+ users who share a similar passion for certain topics.

Gather+ will allow its users to:

- Create a Gather+ account that they will be able to manage, edit, or delete
- Join a variety of communities centered on topics found within each of the four hubs and take part in a community discussion centered on that topic.
- Browse different book titles in the Books hub and read them via an e-reader.
- Listen to a variety of ongoing podcasts hosted on the Podcasts hub.
- Read current news articles found on the News hub.
- Play several popular online games listed on the Games hub.

Whereas many other social media sites focus solely on user-submitted content, Gather+ will instead focus on fostering relationships between its users and encouraging all communities to enjoy the many interests that we all share during this unique and unprecedented time.

Gather+ URL: https://lamp.cse.fau.edu/~cen4010s2020_g07/GatherPLUS

Executive Summary

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People in today's world live in a very uncertain time. In the current year alone, we have seen unprecedented events that have taken both a physical and mental toll on the public. Over the past few months, the COVID-19 pandemic and quarantine practices have radically changed the lifestyles of billions of people around the globe. Many of us now lack the daily interaction we had with our friends, peers, and coworkers. Although things like social media can help remedy these feelings of isolation and separation, we believe these platforms do not go far enough in giving their users the camaraderie they desire.

We, the working members of FunkyTech, have decided that people now need a social platform that goes beyond surface-level sharing and posting. This decision of ours will take the form of our website Gather+, a platform based on connections rather than content.

Gather+ (pronounced Gather-PLUS) will allow its users to join communities centered on topics that interest them and communicate with other people within that group. Unlike other sites which use character/post limits and content rating algorithms that hamper communication, Gather+ will promote the idea that every user should be able to join a community and be a part of the conversation. Users will be encouraged to engage in thoughtful discussions centered on uplifting topics that many people are missing because of the pandemic.

COVID-19 has revealed that millions of people still struggle with the loneliness of quarantine/lockdown despite the abundance of social media platforms available in web and mobile form. Thus, Gather+ and its emphasis on "connection over content" will seek to bridge people together and form communities that will ideally outlast the pandemic.

Competitive Analysis

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Gather+	Competitors (Facebook, Twitter, Reddit)
Connection-Based	Content-Based
Equality of All Material	Content Rating
Positivity Focus	Monetization Focus
Ad-Free	Paid/Promoted Advertisements

The motto for the development of Gather+ is “Connection over content”, which is what we believe will separate Gather+ from many of the traditional social media sites used today. Sites like Facebook, Twitter, and Reddit all revolve around the idea of their users submitting content through their profiles. This content is then subject to a rating system (Facebook likes, Twitter retweets, Reddit upvotes) that prioritizes more popular content. These systems ultimately incentivize users to post content that has the best chance at being viral, and while this mindset does have its advantages (primarily financial ones), we believe it also has drawbacks that can prove detrimental to many users. Since more popular content is often easier to see on these platforms, some users may feel like their impact on the site may not be as important since they do not have as big a following as other users.

This is the issue that Gather+ seeks to resolve. Instead of “content-based”, Gather+ will be “connection-based” and allow all users to be on equal footing. Users will join discussions that will not be driven by a rating system. Therefore, all users can make a substantive contribution to the conversation. Users can measure their perceived success on Gather+ by the number of meaningful and engaging conversations they partake in, instead of feeling measured by a voting system. Additionally, Gather+ will place an emphasis on encouraging content, ensuring that users will enjoy the website and feel welcome on it.

Data Definition

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Team Definitions

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- The team name for Group 7 in CEN 4010. Composed of Brent Werne, Michael Resendes, Betsy Kuruvila and Michael Simon.

“Connection Over Content”

- The team motto for this project’s development. The emphasis is on designing our application to encourage users to engage in thoughtful conversation, and form lasting bonds with other users, rather than posting content for feedback.

Gather+

- The name of the website/web-based application that will be hosted on the team’s **LAMP Server**. (Pronounced: Gather-PLUS).

Front-End Definitions

Bootstrap

- CSS framework used to standardize the design and appearance of the **Gather+** web application.
- **Bootstrap License**: <https://github.com/twbs/bootstrap/blob/v4.0.0/LICENSE>

Really Simple Syndication (RSS)

- Web-feed distribution method that will allow Gather+ to host a variety of article-related content provided by various websites and organizations.

Back-End Definitions

LAMP Server

- Gather+ will be hosted on the team’s FAU LAMP (Linux, Apache, MySQL, PHP) server, which will handle all management of PHP and SQL utilized by the **Gather+** web application.
- **LAMP Server**: https://lamp.cse.fau.edu/~cen4010s2020_g07/

MySQL Database Management System/phpMyAdmin

- Gather+ will utilize a MySQL DBMS hosted locally on the team's **LAMP Server**. General editing and management of the database will be done through the phpMyAdmin tool also hosted on the **LAMP Server**.
- **phpMyAdmin**: <https://lamp.cse.fau.edu/phpMyAdmin>

"user_accounts" Database

- The "user_accounts" database will be one of the MySQL databases hosted on **LAMP**. This database will store user information after they have created an account with **Gather+**. Information will include a user's first name, last name, chosen username, bcrypt encrypted password, e-mail address, and a list of the **Communities** he or she has joined.

"Messageboard" Database

- Several "Messageboard" databases will be stored on the **LAMP server**. Each database will be linked to the **Placard** that hosts the **Community** discussion board on which users will communicate. **Messageboard** databases will store the usernames and the text of comments submitted by members of a given **Community**.

Main Page Definitions

Feature-Main Page

- The home/landing page of **Gather+**. Users will be greeted on-screen with several positive messages and images via a hero section/carousel. Users will be prompted to create an account or sign-in to a previously created account via a **Login Modal**. Signed-in users will then select one of the four central **Hubs** displayed on the **Feature-Main Page**.

Login Modal

- A modal form that will appear on top of the **Main Page**, **"My Profile" Page**, and **Placard Page** allowing a user to sign-in to their **Gather+ Account** or follow a link to the **Sign-Up Page** to create an account.

“My Profile” Definitions

Gather+ Account

- Accounts created by Gather+ users. Users will be able to customize their profile on the “My Profile” Page. Users will use their accounts to join Communities where they can partake in various discussions on a variety of topics.

“My Profile” Page

- An account profile page where Gather+ users will be able to view and edit aspects of their profile. The page will display a user’s username, first and last name, e-mail address, and the list of Communities the user has joined.

Blurb

- A short, optional biography a user may add to his or her profile once it has been created.

Wellspace Definitions

Wellspace

- A section of Gather+ specifically dedicated to resources on COVID-19 and wellness. Relevant information will be posted here to keep users up-to-date on news regarding the pandemic, and what precautions they can take to keep themselves and others safe during quarantine/lockdown.

Hubs Definitions

Hubs

- Separate web sections of Gather+ dedicated to a central topic that interest users. Default topics for each of the four hubs will be: Books, News Stories, Podcasts, and Games.

Central Topic

- The principal theme of each of the four hubs listed on the Feature Page of Gather+. These topics will be:

Books: The Books Hub will be dedicated to discussions on any fictional or non-fictional literature works, past or present. Some examples of possible subjects within the Books

Hub include: narrative analysis, new book releases, and general conversations about certain authors, series, or genres.

News Stories: The News Stories Hub will be dedicated to current events with an emphasis on positive and encouraging news that will uplift readers in a time of quarantine. Some examples of possible subjects within the News Stories Hub include: success stories within local communities, emerging charitable opportunities, and articles on efforts to combat the pandemic.

Podcasts: The Podcasts Hub will be dedicated to interesting podcasts that users within the hub can enjoy listening to regularly. Some examples of possible subjects within the Podcasts Hub include: a user recommending a new and relatively undiscovered podcast, and discussion on specific episodes of a series.

Games: The Games Hub will be dedicated to gaming and the connection it provides while practicing social distancing. Some examples of possible subjects within the Games Hub include: users looking to form groups for an online multiplayer games, tips regarding trending games, and user-recommended games that are ideal to play remotely.

Placards Definitions

Placard

- Each **placard** will represent an individual media item such as a book, an article, podcast, or game. It will consist of an image, title, and associated button that links to a separate **Placard Page**. Each **placard** will be coupled with a brief description of said content via a modal.

Placard Page

- Every placard in a hub will link to a separate **placard page**. This page will feature three sections. The first section will be a larger image of the **placard** next to a full description of its content. It will have three buttons that a user can click on, the first for accessing content, another to view the discussion, and the last to join a **community**. The access button will open up the second section of the same page, wherein an embedded e-reader, news article, podcast, or game will be provided. Likewise, the community button will enable a user to join the message

board posted in the third section of the page. When clicked, this button will store the **community** name to a user's account.

Community

- A message board that will serve as the place of discussion for any given subject listed by a **placard**..

Overview and Use Cases

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The Gather+ web-based application will serve to be, as its name implies, an online gathering place that closes the social distance created by COVID-19, in a unique and uplifting manner. Whereas self-promotion is the byproduct of many social media platforms, Gather+ focuses on positivity and connection through the formation of group discussions based on four distinct categories: books, news stories, podcasts, and games. Content for each category will be a curated selection of encouraging, intriguing, and mindful items hosted by Gather+ and sourced by other websites. The target audience for Gather+ is seen as youth ages 16 and above, including but not limited to students, young adults, and families.

Say the user is a 17-year old high school student named Ava who has been in quarantine for three months already, with only her mom for company. Not only is she restless, she misses her friends, and somehow making a TikTok video they like is not the same as getting together. She is also separated from the rest of her family, and the constant barrage of news about the pandemic gives her a perpetual sense of anxiety.

When Ava is introduced to Gather+, she'll be greeted by a banner of affirmative quotations on the feature page, which will also showcase a positive news story, a welcome message, and the four main categories inviting her to a new level of engagement. A simple, intuitive, and interactive GUI makes Gather+ easy for Ava to navigate with her average computer skills; and the premise of the site will be largely self-explanatory.

In order to access content and groups, Ava is prompted to create an account. Her account will consist of intentionally basic profile information, such as an avatar or a single photograph, a username of her choice, and an optional 300-character "blurb" biography. Upon creation and login, Ava can click on the icon for any of the four categories, each of which will lead to its own landing page known as a "hub".

Each hub will show Ava a series of books, news stories, games, or podcasts by way of a placard containing a thumbnail image. Ava can peruse each placard by sight or by the accompanying description of the subject matter. When Ava sees a placard that piques her interest, she can opt to join the associated community where she can discuss the

subject of the placard with other members of that community. Each community will serve as a message board where Ava can post her thoughts and interact with fellow users who may do likewise. While Gather+ will furnish one default group for every placard, Ava can create her own groups in any given hub as well. This gives Ava the freedom to discuss more than just the pre-populated placards and post links to other books, stories, or podcasts that may interest fellow Gather+ users.

Now let us say that a man named Ben and his wife Lauren have been homeschooling their three elementary-aged children during the quarantine period. They have not been able to meet with their friends for drinks or have any downtime from parenting. He and his wife are on edge, and no amount of streaming shows or movies online can distract them from the inexorable tension of quarantine.

Ben and Lauren are introduced to Gather+ and are drawn to the game category. When they click on the icon, they see that it is somewhat different from the other three hubs. Placards will open up embedded games or links to external game websites like [codenames.net](https://www.codenames.net), Roblox, and more. Article links will also guide them on the best online games to play during quarantine and how to host virtual game nights. Ben and Lauren finally have a way of connecting with peers their own age.

Teen Ava, along with young parents Ben and Lauren, will also notice a menu link that leads them to a section of Gather+ called “Wellspace”. The Wellspace section will offer resources via links and articles on staying healthy and upbeat during the pandemic, and only the most relevant news regarding the same.

High-level Functional Requirements

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(Ranked by Order of Priority)

1. The Gather+ site shall permit each user to create an account.
 - Credentials for the account will consist of a username and password.
 - Full name and email address will be required at sign up/account creation.
 - Account attributes will include a photographic/avatar icon to be used throughout the site when the user is logged in.
 - Essential purpose of the account is to permit access to media and groups.
 - Data associated with an individual user shall be saved via a database and displayed in his or her account.
2. The Gather+ site shall provide users access to multimedia content.
 - Books and podcasts will be available via embedded pdf viewers and audio players, respectively.
 - News articles shall be sourced via RSS feeds from external news websites/applications.
 - Links to, and guidelines for, online game websites will be listed.
3. The Gather+ site will render messaging boards for topic-related discussions, known as “communities”.
 - Each media item will be coupled with a default community.
 - Users will be able to create communities on topics of their choice within each media section.
 - Communities will enable users to create typed posts and interact with other users.
4. The Gather+ site shall present information concerning the COVID-19 pandemic and wellness.
 - Resources about the pandemic will be featured by way of articles and links to external websites.
 - A messaging board, called a forum, shall be made available in this section for questions related to the pandemic and wellness.

List of Non-functional Requirements

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The minimal performance requirements for the Gather Plus social media platform will be as follows:

- The Gather+ website will allow up to 20 users posting on a single community board at a time.
- The Gather+ graphical user interface will be extremely easy to use. Learning how to navigate the website should take less than 30 minutes on average.
- A b-crypt hash function will be used to secure login information. It will hide users' personal account data from potential threats.
- Expected load time for each page will be under three seconds, even if internet connection is below average.
- All data will be stored in SQL tables hosted by the team's account on the LAMP server.
- The browsers that the Gather+ website will be tested on are Firefox, Chrome, Microsoft EDGE, and Safari.
- The time it will take to refresh the page after a crash will be under five seconds.

High-level System Architecture

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Front-End Architecture

Languages/Scripts

- FunkyTech will utilize markup language HTML5; along with CSS3, Bootstrap 4, and JavaScript for the front-end design of the web application, Gather+.
- HTML, CSS, and Bootstrap will be used to design the layout of the web application and present a clean and concise UI.
- JavaScript and jQuery will be used to provide added functionality to the application, which includes the use of image carousels, logic analysis, API communication, and Bootstrap animations.
- All language/script files will be hosted on the team's LAMP server, as well as on the team's GitHub repository.
 - **LAMP:** https://lamp.cse.fau.edu/~cen4010s2020_g07/
 - **GitHub:** <https://github.com/CEN4010-S2020-G07/CEN4010-S2020-G07>

Browser-Support

- Gather+ will be coded and updated to ensure all features on the application are compatible with the last two versions of the most commonly used desktop web browsers: Chrome, Firefox, Microsoft EDGE, and Safari.

Back-End Architecture

Languages/Scripts

- FunkyTech will utilize PHP and MySQL for the back-end design of Gather+.
- Both PHP and MySQL will be used to communicate with the team's LAMP server, which will host the web application and all the databases used by the app.
- PHP will be used to dynamically update aspects of the application's UI, which includes adding icons that appear once a user has signed-in, updating

Community discussion board content, and providing informational messages that guide users on how to interact with the application.

- PHP will also be used to access and modify the various MySQL databases that will be used by the application. PHP and its use of SQL commands will provide the functionality for users to create and edit their Gather+ profiles, become members of Communities, and submit to specific Community discussion boards.

Databases

- Databases for Gather+ will be hosted on the team's LAMP server and will be monitored and maintained primarily through the server's phpMyAdmin tool.
- Gather+ database servers will be MySQL-based and will contain tables that hold user information, community membership, and discussion board content.
- An Account table will be created manually through the phpMyAdmin tool while message board tables will be created dynamically through the use of PHP scripts found on Gather+.

Account Database

- The Account database will serve as the repository where Gather+ user information will be stored. A general list of items that will be stored in the database table will be as follows:
 - A User's unique "UserID number" [INT(11); Primary key of table]
 - A User's created "username" [VARCHAR(30)]
 - A User's "password" [CHAR(60); stored on the database as a 60 character encryption generated via a bcrypt hash function]
 - A User's "first" and "last" name [VARCHAR(25); VARCHAR(25)]
 - A User's "email" address [VARCHAR(40)]

"Messageboard" Database

- The messageboard database will serve as the repository where discussion comments will be stored along with the username of the contributing user. Messageboard database tables will be generated concurrently as placard topics are added to a hub. Every time a new placard is created on a hub, a Messageboard database table will be generated with the following content:
 - A unique "MessageID number" [INT(11); Primary key of table]

-
- The “username” of the user sending the message [VARCHAR(30)]
 - A “text” string that contains the content of a message [TEXT]

Database Search Protocol

- MySQL databases will be searched and updated using PHP and SQL commands embedded within the HTML documents of the application.
- Any database commands regarding user accounts will first require a connection to the LAMP server using the group’s LAMP credentials (PHP). A user will then be required to sign-in to their Gather+ account with their username and password. The username will be used to search for the user’s profile within the Account database with PHP-embedded SQL commands.
- The password entered by the user will be encrypted through a bcrypt “hash_function()” that will generate a unique 60 character string. If this generated password and the username then matches any username and encrypted password within the Account Database, the user will then be connected to their account and will be able to edit any information within their account.

Additional Architecture

Media Storage

- Images used for carousels, placard headers, icons, user profile pictures and all other related images will be stored under specified “images” files located on the team’s LAMP server.

Podcasts

- Podcasts will be hosted by the Podcast Hub through a free tool from Radio Public at podcasters.radiopublic.com. It allows for the search of any podcast show and generates an embeddable player with HTML iframe code, and includes its metadata. The audio player will then be placed in a Placard Page, allowing a user to listen and communicate with other users within the Community on that page. The process and format will be the same for every Placard and Placard Page in the Podcast Hub.

Note: other sources such as NPR may be utilized as well.

News Articles

- News articles and their accompanying thumbnail and content description will be provided by RSS feeds embedded within the code of the Gather+ web pages.
- The Feature-Main Page of Gather+ will host articles from a specific positive-news source with the RSS script included in its HTML code.
- The News Hub will also display Placards that link to their respective Placard Pages. Those pages will contain RSS feeds that open articles in their source websites.

Books

- Books will be provided via embedded PDF viewers that display files directly from PDF Drive, a free source of thousands of e-books in PDF format.
- PDF files of e-books will be stored locally on the LAMP server and read through an iframe HTML tag.
- Metadata for books (and news), cover images, and book descriptions will be pulled from an e-reader management software program called Calibre. It is licensed under the GNU General Public License version three.

Game Hosting

- The “Games” hub of Gather+ will be composed of two separate types of virtual games, divided into two sections on the “Games” hub.
- Both sets of games will include placards that display relevant information on the game and how to play.
- The first set of games will be embedded within the Games Hub page, which will allow users to access them in a separate window that will display the game and allow a user to begin playing.
- The second set of games will be composed of links to free games hosted on other sites. These will be represented on placards that contain a hyperlink to the game in addition to information on the game itself.

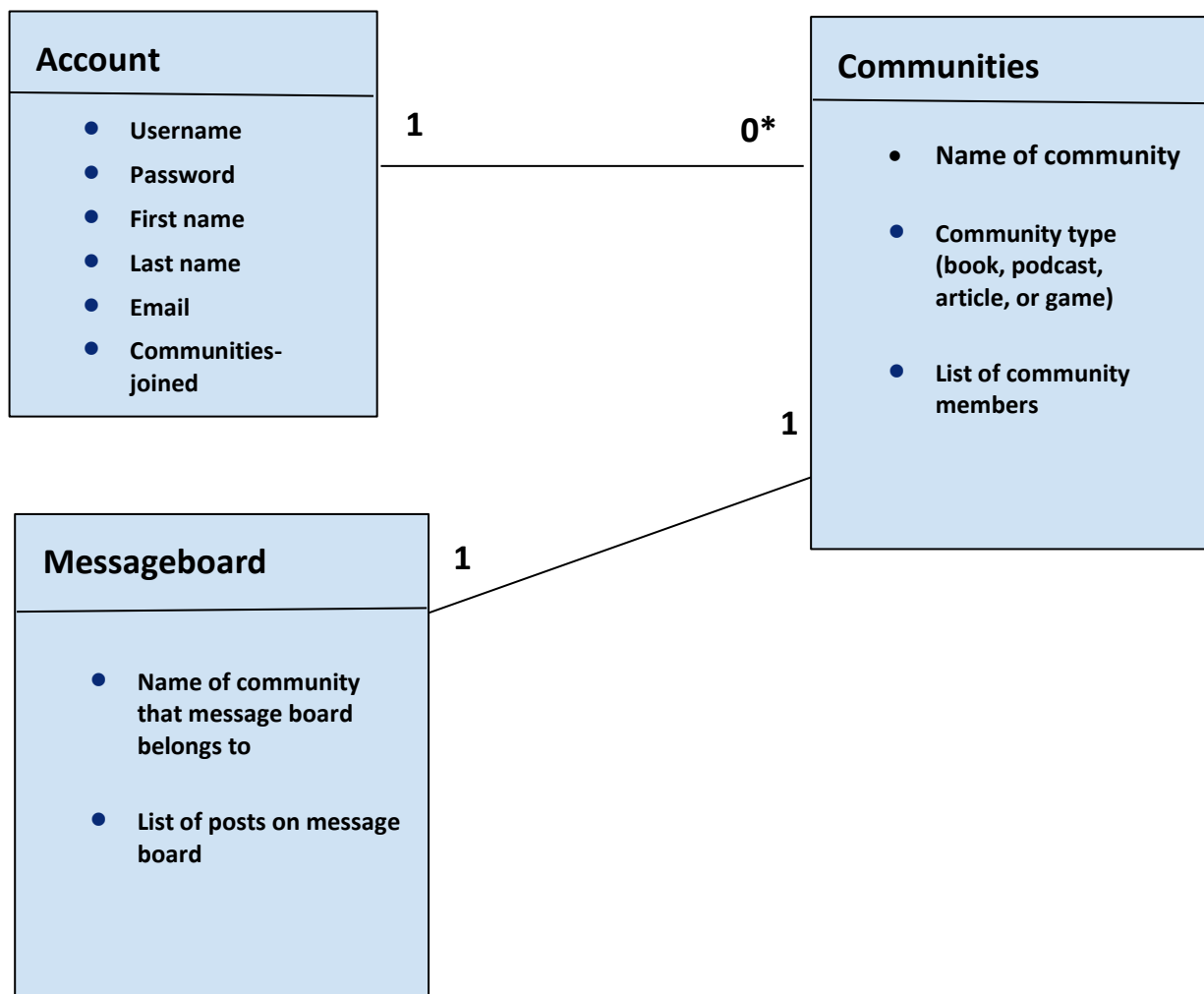
External Code/Licenses:

Code	License
Bootstrap 4 (V4.0.0)	https://github.com/twbs/bootstrap/blob/v4.0.0/LICENSE
Calibre	https://github.com/kovidgoyal/calibre/blob/master/LICENSE

High-Level UML Design

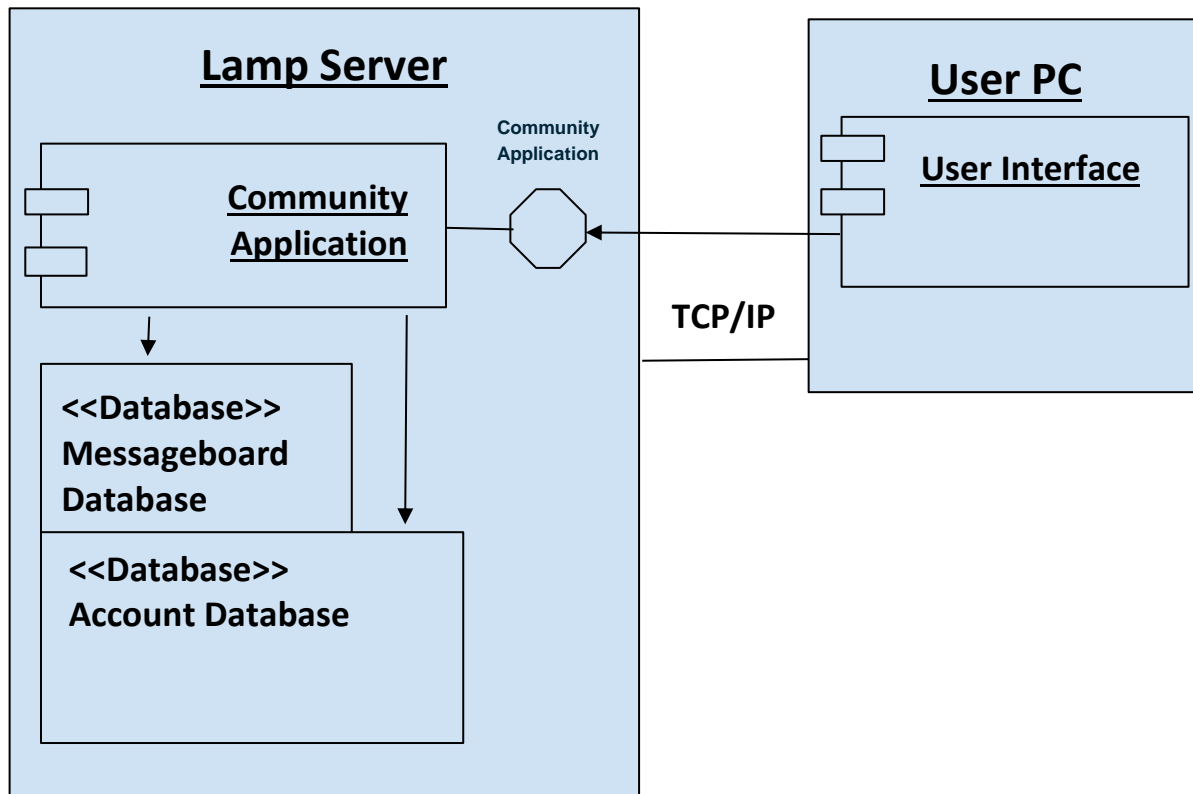
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UML Implementation Classes Diagram:



A user may join as many communities as he or she desires. Each community has a message board assigned to it. When the user wants to interact with a message board, he or she must first most join the Community to which that message board is assigned. While the user is a member in that Community, he or she can post messages onto the message board and view them as well.

UML Component and Deployment Diagram:



The User's PC views the user interface, and the user interface interacts with the community application on the Lamp Server. The community application is connected to the different Messageboard databases that hold the messages for the different communities offered on the site. This allows the user to post messages and read messages through the community application. The community application is also connected to the Account database. It can check if a user is a part of a community and update his or her status as a member of the community.

Risk Assessment

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Technical Risks

- **Risk:** Updating regular content to the Gather+ application may prove to be a challenge as we may not be able to provide 24-hour support for the site. Thus, certain hubs that require more regular maintenance and updates, such as the books or podcasts hubs, may need to be approached differently from a design standpoint than the other two hubs.
- **Possible Solution:** Researching different methods of discovering and updating content on a web page may allow these hubs to function properly without the need for constant supervision. We might be able to discover APIs or web feeds that provide the steady stream of updates we would need for the books or podcasts hub.

Legal/Content Risks

- **Risk:** As it currently stands, the sources used to provide Gather+ with books, podcasts, news articles, and virtual games are all believed to be fair-use, free-to-use, and/or web syndicated. However, as with most issues regarding legality and copyright, more careful research and consideration will need to be done by our design team before we can confidently host this content on our application.
- **Possible Solution:** A more thorough examination of each source's legal documents, terms and conditions, and disclaimers would allow the Gather+ team to correctly ascertain which possible content sources will be fair-use for our application. As the team begins development for the product beta, we intend to carefully vet these sources before including them in the app.

Milestone 3 - 4 Feedback

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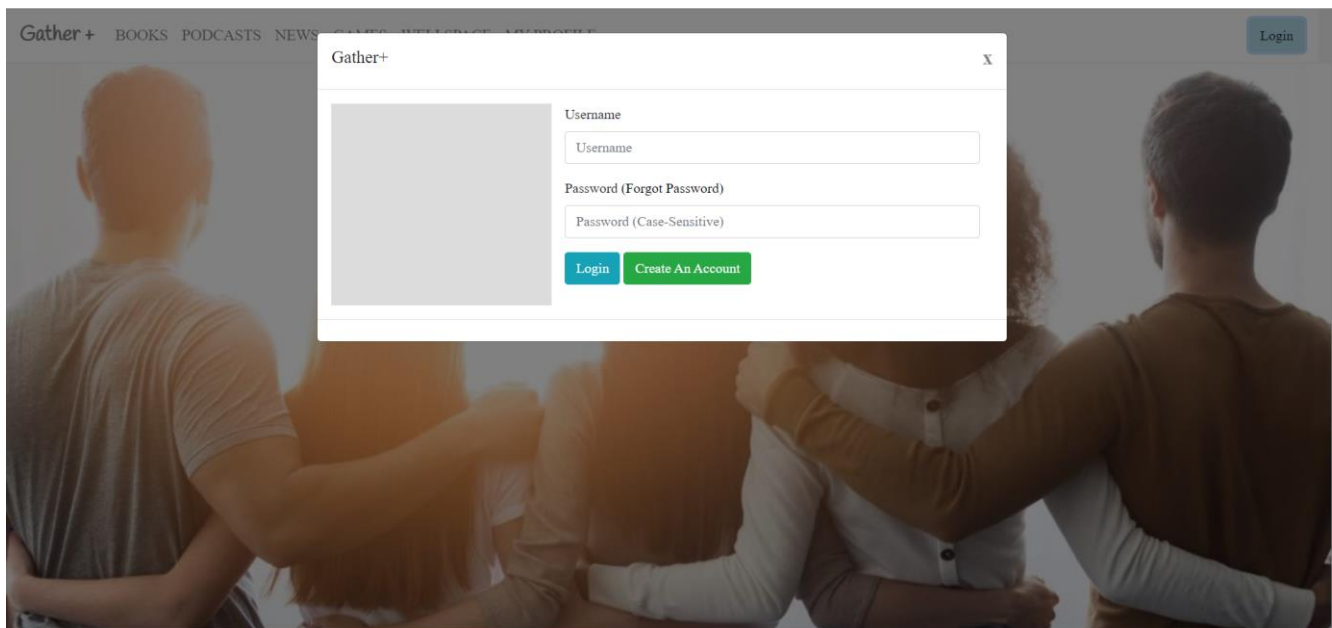
Feedback

- Milestone 3 originally lacked the indication that the requirements listed in “High-Level Functional Requirements” were numbered by highest priority listed first. This change has been made and is now reflected in the “High-Level Functional Requirements” section found in this M5 document.
- No additional feedback was given for the M3 and M4 document submissions.

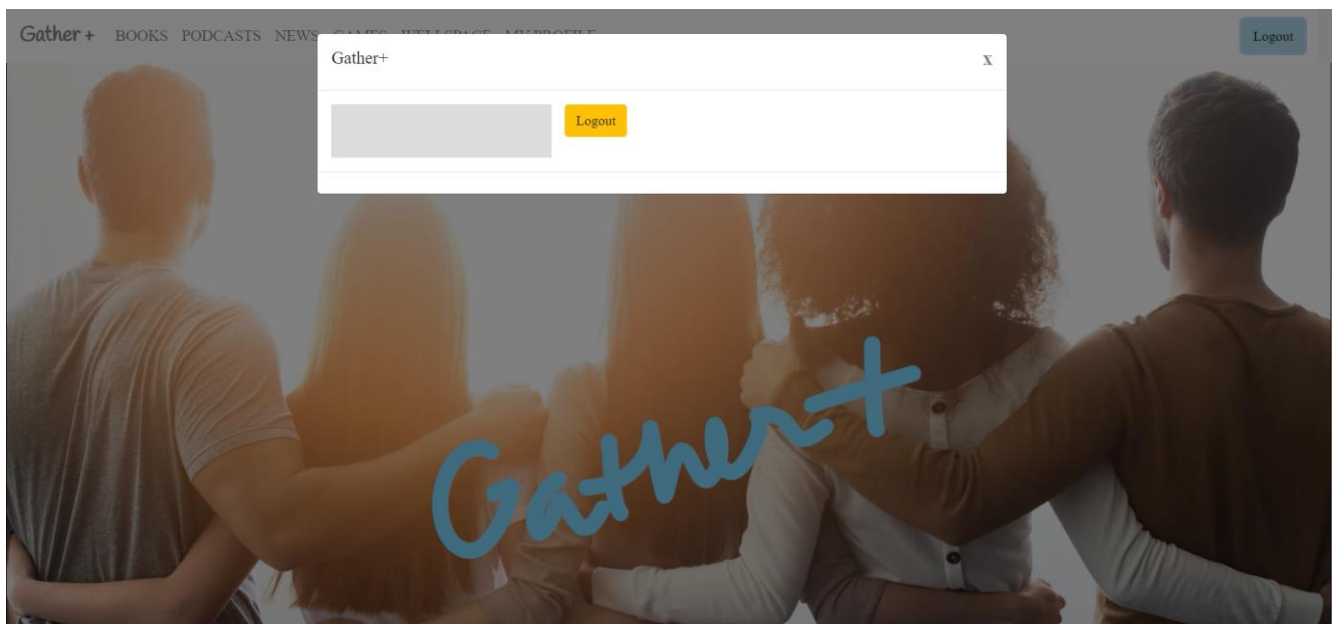
Pictures of Final Project

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Login modal that has username and password input, “Login” button, “Create An Account” button and link to forgot password page if user clicks on “(Forgot Password).”



Logout modal



Password recovery page that sends email to users when they forget their password

Gather+ PODCASTS NEWS GAMES WELLSPACE MY PROFILE

Login

Forgot Password

Please Fill In All Fields to Recover Password

Back to Home

Please enter your email address and we will send email for you to recover your password

E-mail Address

Request Password

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RSS Feed for news

Good News +



What went right: renewables made history, plus other positive news stories

Red kites soared to new heights in England, coal was killed off in Portugal and there was positive news for...

positive_news • Jul 24

Graphical display on main page to access all four hubs.

Select a Category, Join a Community!



BOOKS



PODCASTS

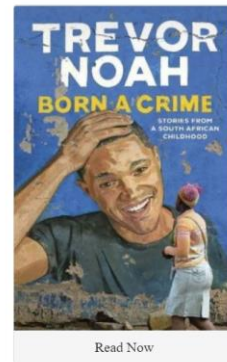
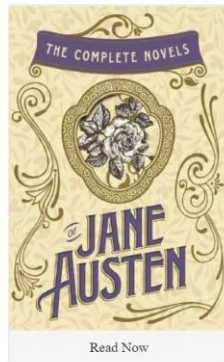


GAMES

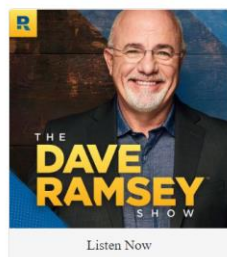


ARTICLES

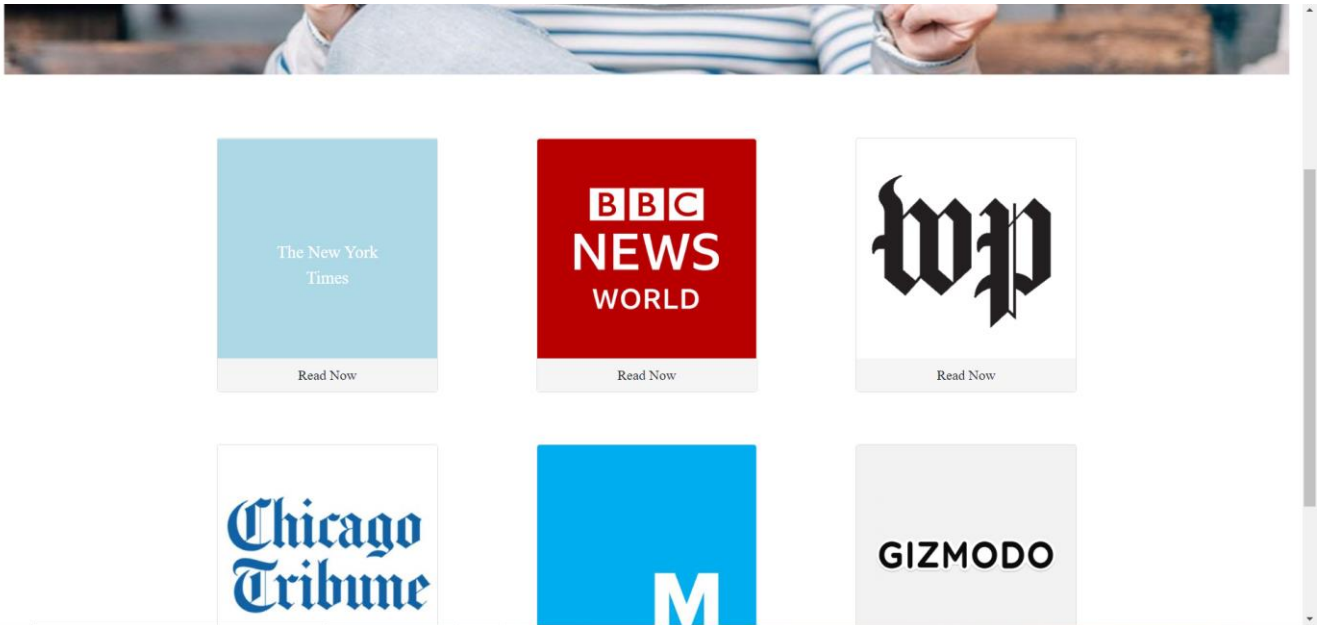
Book Hub (select books to read and communities to join)



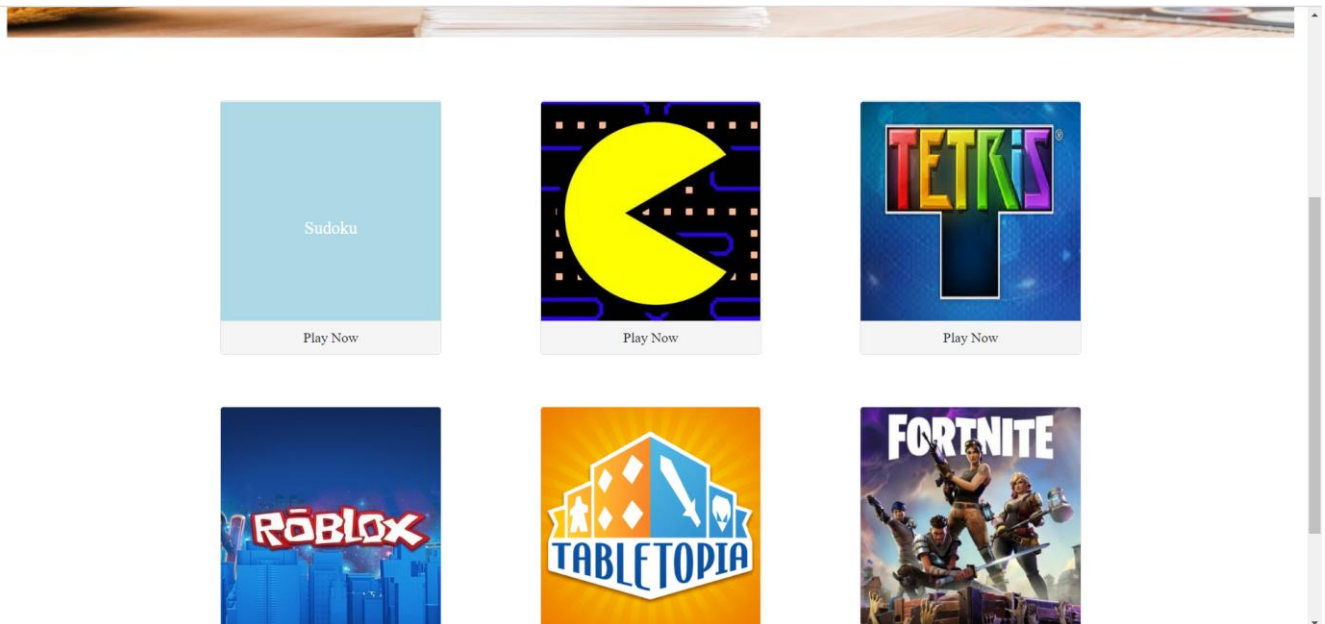
Podcast Hub (select podcast to listen to and communities to join)



News Hub (select news articles to read and communities to join)



Game Hub (select games to play and communities to join)



Book Placard page (read books, and post on the discussion board)

Gather+

BOOKS

PODCASTS

NEWS

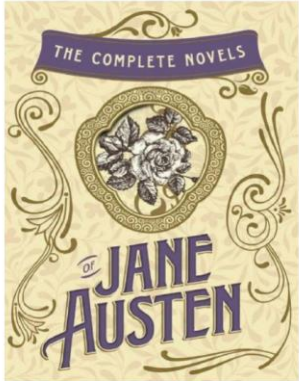
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By: Jane Austen

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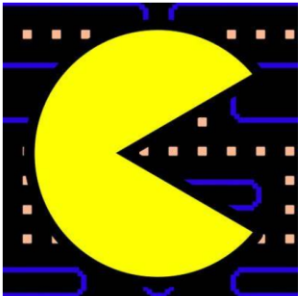
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ClassicPac

Pacman was developed by a Namco employee by the name of Tru Iwatani. The whole game took him about a year to dream up and bring into reality. He began working on the game in April of the year 1979 and with the help of a team of nine men; he was able to come up with this game that has changed the way people play games forever. Revisit an updated version of this classic 80's favorite!

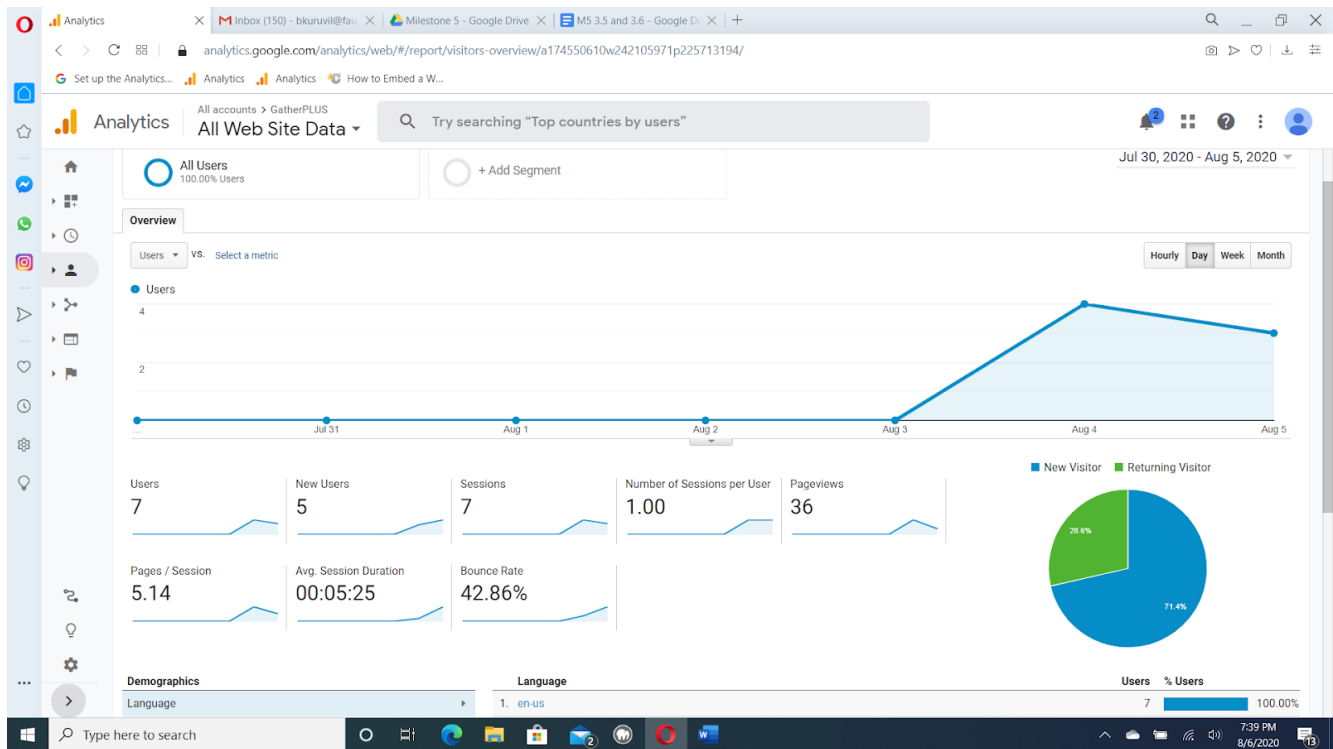
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Analytics Plot

FunkyTech

<https://analytics.google.com/analytics/web/#/report/visitors-overview/a174550610w242105971p225713194/>



Team Member Contributions

FunkyTech

Throughout the software development process, the members of Team FunkyTech cooperated in a number of ways to bring the Gather Plus web application to fruition.

Michael Simon (25%) contributed structural and conceptual ideas to the feature page, game hub, and wellspace. Sought out sources for content and viable software components. Completed risk assessment and brought in traffic for data analytics.

Brent Werne (25%) served as lead back-end developer but contributed significantly to all aspects of the process and project. Researched APIs, software, and content. Wrote code and/or markup with php, JavaScript, HTML, and CSS. Routinely checked for errors and maintained the site. Contributed conceptual ideas and worked closely with other group members to make changes and improvements to the application. Populated and managed files in the database. Wrote substantially for milestone documentation.

Betsy Kuruvila (25%) served as lead front-end developer. Conceptualized the design of the site from initial sketches through to the final product. Created the coded structural template of the application and subsequently populated its elements and design. Ensured that proper software development processes were being followed. Established workflow through Trello and other tools. Managed files on LAMP and GitHub with team. Created the team website.

Michael Resendes (25%) was Product Owner and team lead for the duration of the project. Lead and organized meetings. Served to write, format, edit, and finalize milestone documentation. Oversaw files on GitHub along with the team. Wrote and maintained the “readme” log. Created all demonstration videos and the final PowerPoint. Coded a large portion of back-end code and worked closely with other members for debugging. Created, populated, and managed database structures.

Post-Project Analysis

FunkyTech

Highlights

The development of the Gather+ application showcased many of the talents of the various members of Group 7. Meetings conducted early in the development process helped us ascertain each member's strengths and weaknesses, and project roles were divided accordingly. The team attempted to pair team members together who's skills in certain areas complemented each other. This allowed us to learn new skills from other members while still refining the abilities we already felt comfortable with.

Challenges

Communication among the members of Group 7 was occasionally hampered by a lack of consensus on what tasks were to be completed. The Gather+ team did hold regular weekly meetings to clear up any confusion, but there were still a few times where members began working on different tasks before earlier ones were finished. In future projects, the team will likely encourage more individual meetings between members to help clarify what needs to be done and by whom.

Time management was also an area that will possibly need to be improved in future projects. Timeframes for task completion were often assigned during group meetings, but these windows were sometimes too short to be completed with the quality we desired. This issue was the cause for removing certain features that we had planned to implement, such as a direct-messaging system for the application, which we did not believe we had the time to complete and still be on pace to deliver the product. Therefore, greater consideration will have to be made by group members on the nature of a task and how confidently we believe we can accomplish a task in a reasonable timeframe. Thus, a greater emphasis on time management will likely be used in future assignments.

Project Demonstration Info

FunkyTech

- YouTube Link:
https://youtu.be/94oWcVJr_bc
- Gather+ Application Link:
https://lamp.cse.fau.edu/~cen4010s2020_g07/GatherPLUS
- Gather+ GitHub Repository:
<https://github.com/CEN4010-S2020-G07/CEN4010-S2020-G07>