Rooted

Project Backlog
August 30, 2019

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Problem Statement

Though it is very common for college students to find their home within groups or communities while they attend school, they often completely fall out of the loop and lose relevance once they graduate. Simultaneously, new members who join miss out on the opportunity to network and seek wisdom from the decade-long history of the group's alumni.

Our app, 'Rooted', seeks to provide a networking platform where communities of people can keep a clean and well-documented history of all of their past members. The page will be designed to follow the structure of a tree, flowing with branches down the page that contain pictures of all alumni and links to their contact information. Such a platform provides two major benefits: the preservation of stories and accomplishments of all former members, and the creation of an expansive network for any member throughout time to reach out to for opportunities.

Background Information:

While many other social networking platforms seem to center their experience around individuals and what they are up to now, Rooted strives to focus on groups of people and places emphasis on the entire lifespan of the community. Our target audience will encompass a wide range of ages. Our website will cater to people who are a part of an organization who are interested in connecting with other previous and past members.

The only other main way for large groups to stay networked is through Facebook group pages, however such pages generally do not preserve a well-documented history of a group or its members. This makes it difficult for members who were not active during the same time frame to get to know each other, and connections between alumni and current members will likely not be established. Additionally, people tend to leave or mute notifications for groups that they are no longer directly involved in.

Functional Requirements

Stories for Logging In

Backlog ID	Functional Requirement	Hours
1	As a new user, I would like to be able to register for an account	2
2	As an existing user, I would like to be able to login	4
3	As an existing user, I would like to be able to logout	2
4	As a user, I would like to be able to edit my email address	1
5	As a user, I would like my password to be reset if I forget it	1
6	As a user, I would like to be able to change my password	1

Stories for General Users

7	As a user, I would like to be able to create and edit a general profile page, with info such as my name, birth year, bio, links to social media, etc	3
8	As a user, I would like to be able to upload a profile image	4
9	As a user, I would like to be able to selectively hide or display specific info on my profile page	2
10	As a user, I would like to be able to upload photos to my profile page's photo library	4
11	As a user, I would like to be able to view all groups that I am a part of from my general profile page	1
12	As a user, I would like to be able to view other	1

	user's profile pages	
13	As a user, I would like to be able to directly message other users	2
14	As a user, I would like to be able to receive notifications	2
15	As a user, I would like to be able to search for groups	2
16	As a user, I would like to be able to request to join a group	2
17	As a user, I would like to be able to respond to invites to groups	2
18	As a user, I would like to be able to create a group and be granted group creator privileges	2
19	As a general user, I would like to be able to report users of a group to the group's moderation team	1
20	As a general user, I would like to be able to report a group to the sitewide admins	1

Stories for Sitewide Admins

21	As a sitewide admin, I would like to be able to close any group	18
22	As a sitewide admin, I would like to be able to globally ban any user	18
23	As a sitewide admin, I would like to be able to globally unban any user	27

Stories for Group Moderation Team

Backlog ID	Functional Requirement	Hours
24	As a group creator or group admin, I would like to be able to change the role statuses of other members within my group (e.g. admin, moderator, member)	2
25	As a group admin or moderator, I would like to be able to ban users from my group	1
26	As a group admin or moderator, I would like to be able to unban users from my group	1
27	As a group admin, I would like to be able to close my own group	1
28	As a group admin or moderator, I would like to be able to invite non-members to join my group	1
29	As a group admin or moderator, I would like to be able to approve non-member requests to join my group	1
30	As a group admin or moderator, I would like to be able to customize the color scheme of my group page	23
31	As a group admin, I would like to add announcements.	21
32	As a group admin, I would like to remove announcements	11
33	As a group admin, I would like to be able to add non-rooted members.	23
34	As a group admin, I would like to be able to approve or reject announcement requests.	19
35	As a group admin or moderator, I would like to be able to edit our about page	1
36	As a group admin, I would like to be able to kick a member out of the group.	10

37	As a group admin, I would like to be able to make my group public or private	1
38	As a group admin, I would like to be able to visibly establish a distinction between non-rooted members and rooted members	18

Stories for Group Members

39	As a rooted member of a group, I would like to be able to add/edit my involvement/year	45
40	As a member of a group, I would like to be able to upload photos to my page within the group	3
41	As a member of a group, I would like to be able to request to the group moderation team that certain non-members be invited to the group	17
42	As a group member, I would like to be able to request for an announcement to be displayed to the group admin team.	17
43	As a group member, I would like to be able to anonymously submit messages to the group moderation team	16
44	As a group admin, I would like to remove photos from the group photos page.	14

Nonfunctional Requirements

Architecture and Performance

We will be developing the application with a separate frontend and backend. This will allow us to effectively divide our work between the members in our group, decrease the compatibility issues between the two sides, and also make version control a lot easier. We plan on using the MEAN stack (MongoDB, Express, Angular, and Node) as it is a popular and proven software stack with lots of resources and documentation for when we need assistance. The

frontend will be constructed using React and will pull data from the backend via requests to the API. Separating the backend from the frontend will also ease the burden of expanding to more platforms such as iOS or Android. Since MongoDB is not real-time, our application will not have real-time responsiveness. However, all requests and responses will be very quick.

Security

Since we will be storing a lot of information sensitive to our users, we want to take the necessary measures to make sure our application is secure. There are many existing modules that can be easily integrated into Express/Node that includes several security features to fight against common exploits. Furthermore, we will be limiting access to features on the website through the use of user roles and requiring authentication for all API requests in order to prevent exploitation of backend routes. We will also be utilizing hashing to make sure sensitive information in our database is secure such as with passwords.

Usability

The interface will be easy to navigate for users, with an intuitive and simple user interface. Organization will be important, with lots of features, to make sure the home page and screen is not too cluttered. Any user should be able to navigate the website on their own accord, and without needing a demonstration or tutorial. As our target audience will be variable (a wide range of ages) we want to make sure people with different levels of technological fluency will all be able to use our website without issue.

Hosting/Deployment

For hosting, many of our team members have existing experience deploying using Heroku and it is well integrated with GitHub, which is the platform we will be using to handle version control. Having continuous integration and deployment with GitHub through Heroku will allow our development process to move much more efficiently.

Use Cases

1. As a user, I would like to be able to register for a Rooted account.

Case: Register for a Rooted account	
Action	**System Response**
1. Click 'Register'	2. Redirect to a Register page
3. Input email, username, and password	5. Redirect to Home page
4. Click 'Submit'	

2. As a user, I would like to be able to log in.

Case: Login to Rooted account	
Action	**System Response**
1. Click 'Login'	2. Redirect to a Login page
3. Input username and password	5. Redirect to Home page
4. Click 'Submit'	

3. As a user, I would like to be able to logout of my Rooted account.

Case: Edit Email Address	
Action	**System Response**
1. Click 'Logout'	2. Redirect to 'Login/Register' page

4. As a user, I would like to be able to edit my email address.

Case: Edit Email Address	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to 'Edit Profile' page

3. Input new email address	5. Redirect to Home page
4. Click 'Save'	

5. As a user, I would like my password to be reset if I forget it.

Case: Reset password for a Rooted account	
Action	**System Response**
1. Click 'Reset password'	2. Send temporary password in email to user
3. User logs in with temporary password	5. Redirect to login
4. Click 'Change password' (optional)	

6. As a user, I would like to be able to change my password.

Case: Change password for a Rooted account	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to 'Edit Profile' page
3. Click 'Change Password'	4. Redirect to 'Change Password' page
4. Input new password	8. Send password change confirmation in email to user
5. Input new password again for confirmation	
6. Input old password	
7. Click 'Save Changes'	

7. As a user, I would like to be able to create and edit a general profile page, with info such as my name, birth year, bio, links to social media, etc

Case: Create and Edit General Profile Page	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to a 'Edit Profile' page
3. Input name, birth year, bio links to social media, etc	5. Redirect to Home page
4. Click 'Save Changes'	

8. As a user, I would like to be able to upload a profile image

Case: Upload a Profile Image	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to a 'Edit Profile' page
3. Click 'Upload Profile Image'	4. Ask user to upload photo from his local drive
5. Click image to upload	6. User's profile image is uploaded and displayed on his or her profile page

9. As a user, I would like to be able to selectively hide or display specific info on my profile page

Case: Hide or Display Profile Info	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to a Register page
3. For any specific info, under click 'Show/Hide'	6. Redirect to Home page
4. Select 'Hide'	
5. Click 'Save Changes'	

10. As a user, I would like to be able to upload photos to my profile page's photo library

Case: Upload Photos	
Action	**System Response**
1. Click 'Edit Profile'	2. Redirect to an edit profile page
3. Click upload images	4. Prompt user with file upload popup
5. Select image	
6. Click submit	7. Upload images to user's profile
8. Repeat as needed	
9. Click 'Save Changes'	

11. As a user, I would like to be able to view all groups that I am a part of from my general profile page

Case: Display Groups User is a part of	
Action	**System Response**
1. Click Profile page link	2. Redirect to Profile page
3. General profile page should reflect groups	

12. As a user, I would like to be able to view other user's profile pages

Case: View Other User's Profile Pages	
Action	**System Response**
1. Click a particular group	2. Redirect to Group's page
3. Locate member's name	
4. Click on member's name	5. Redirect to member's group profile page

13. As a user, I would like to be able to directly message other users

Case: Directly Message Other Users	
Action	**System Response**
1. Navigate to member's profile page	
2. Click the message button	3. Generate a pop-up and begin a message history with user and member
4. Enter Message	
5. Click send	6. Deliver Message

14. As a user, I would like to be able to receive notifications

Case: Receive Notifications	
Action	**System Response**
1. Click Profile page link	2. Redirect to Profile page
3.Click view Notifications	4. Generate a display of notifications for user

15. As a user, I would like to be able to search for groups

Case: Search for Groups	
Action	**System Response**
1. From any page click on the search bar	
2. Type in any desired group	3. Filter results by search criteria
4. Click on desired group to learn more	

16. As a user, I would like to be able to request to join a group

Case: Request to Join a Group

Action	System Response
1. Click on desired Group	2. Redirect to Group page
3. Click "Request to join group"	4. Create popup informing user of successful action
	5. Send a notification to moderators with the ability to confirm or deny access

17. As a user, I would like to be able to respond to invites to groups

Case: Respond to Group Invites	
Action	System Response
1. Click Profile page link	2. Redirect to Profile page
3.Click view Notifications	4. Generate a display of notifications for user
5. Select a group invite	6. Generate pop-up with options to accept or deny
6. Select Accept	7. Add user to group
	8. Remove Group invite from notifications

18. As a user, I would like to be able to create a group and be granted group creator privileges

Case: Create a Group and Receive Creator Privileges	
Action	System Response
1. Click 'Create Group'	2. Redirect to a Register Group Page
3. Input group details	
4. Click 'Submit'	5. Generate group of the given details
	6. Grant Group Creator Admin privileges to user

19. As a general user, I would like to be able to report users of a group to the group's moderation team

Case: Report Other Users	
Action	**System Response**
1. Navigate to group page	2. Redirect to Group Page
3. Select desired group member	3. Redirect to member's group profile
4. Click 'Report member'	5. Generate pop-up confirming user's actions
6. Select 'Yes'	7. Generate pop-up informing user of successful action
	8. Generate a report of user details and member details and submit to moderators notifications

20. As a general user, I would like to be able to report a group to the sitewide admins

Case: Report Groups	
Action	**System Response**
1. Navigate to a group page	2. Redirect to Group Page
3. Click 'Report Group'	3. Generate pop-up confirming user's actions
4. Select 'Yes'	5. Generate pop-up informing user of successful action
	6. Generate a report of user details and member details and submit to moderators notifications

21. As a sitewide admin, I would like to be able to close any group

Case: As Sitewide Admin, Close Group	
Action	**System Response**
1. Navigate to a group page as an admin	2. Redirect to Group Page
3. Click 'Close Group'	3. Generate pop-up confirming user's actions
4. Select 'Yes'	5. Generate pop-up informing user of successful action
	6. Generate a report of user details and member details and submit to moderators notifications

22. As a sitewide admin, I would like to be able to globally ban any user

Case: As Sitewide Admin Ban any User	
Action	**System Response**
1. Search for a given user	2. Populate search results with users
3. Click on said user's name	4. Redirect to user profile
5. Click 'Ban'	6. Generate pop-up confirming user's actions
7. Select 'Yes'	8. Generate pop-up informing user of successful action

23. As a sitewide admin, I would like to be able to globally unban any user

Case: As Sitewide Admin Unban any User

Action	System Response
1. Search for a given user	2. Populate search results with users
3. Click on said user's name	4. Redirect to user profile
5. Click 'Unban'	6. Generate pop-up confirming user's actions
7. Select 'Yes'	8. Generate pop-up informing user of successful action

24. As a group creator or group admin, I would like to be able to change the role statuses of other members within my group (e.g. admin, moderator, member)

Case: As Group Creator/Admin, Change Role Status of Other Member	
Action	**System Response**
1. Navigate to group page	2. Redirect to Group Page
3. Select desired group member	3. Redirect to member's group profile
4. Click 'Change Role'	5. Generate pop-up containing role options
6. Select desired role	7. Generate pop-up confirming user's actions
8. Select 'Yes'	9. Generate pop-up informing user of successful action
	10. Generate a report of user details and member details and submit to moderators notifications

25. As a group admin or moderator, I would like to be able to ban users from my group

Case: As Group Admin/Moderator, Ban User From My Group	
Action	**System Response**
1. Navigate to group page	2. Redirect to Group Page
3. Select desired group member	3. Redirect to member's group profile
4. Click 'Ban member'	5. Generate pop-up confirming user's actions
6. Select 'Yes'	7. Generate pop-up informing user of successful action
	8. Generate a report of user details and member details and submit to moderators notifications

26. As a group admin or moderator, I would like to be able to unban users from my group

Case: As Group Admin/Moderator, Unban User From My Group	
Action	**System Response**
1. Navigate to group page	2. Redirect to Group Page
3. Select desired group member	3. Redirect to member's group profile
4. Click 'Unban member'	5. Generate pop-up confirming user's actions
6. Select 'Yes'	7. Generate pop-up informing user of successful action
	8. Generate a report of user details and member details and submit to moderators notifications

27. As a group admin, I would like to be able to close my own group

Case: As Group Admin, Close Group

Action	System Response
1. Navigate to a group page as an admin	2. Redirect to Group Page
3. Click 'Close Group'	3. Generate pop-up confirming user's actions
4. Select 'Yes'	5. Generate pop-up informing user of successful action
	6. Generate a report of details and submit to moderators notifications

28. As a group admin or moderator, I would like to be able to invite non-members to join my group

Case: As Group Admin/Moderator, Invite Non-Members to Group	
Action	System Response
1. Search for a given user	2. Populate search results with users
3. Click on said user's name	4. Redirect to user profile
5. Click 'Invite to Group'	6. Generate pop-up containing list of groups
7. Select desired group	8. Generate pop-up confirming user's actions
9. Select 'Confirm'	10. Generate pop-up informing user of successful action

29. As a group admin or moderator, I would like to be able to approve non-member requests to join my group

Case: As Group Admin/Moderator Approve Non-member Requests	
Action	System Response
1. Click 'Notifications'	2. Redirect to a Notifications

3. Click on 'Approve Request'	4. Generate pop-up confirming user's actions
4. Click 'Submit'	6. Generate pop-up informing user of successful action

30. As a group admin or moderator, I would like to be able to customize the color scheme of my group page

Case: As Group Admin/Moderator Customize the Color of My Group Page	
Action	**System Response**
1. Click 'Edit Page'	2. Check if user is a Moderator or Admin
3. Click 'Customize Background	4. Redirect to 'Edit Group' page
5. Select desired color scheme	6. Open up color scheme panel
	7. Write new color to database
	8. New color should be shown on page

31. As a group admin, I would like to add announcements

Case: As Group Admin/Moderator Upload Custom Group Page Banner	
Action	**System Response**
1. View tree page	2. Check if user is an Admin
3. Click Admin dashboard	4. Redirect to Admin dashboard
5. Click 'announcements' tab	6. Display announcements tab
7. Click 'Add Announcement' button	8. Redirect to add announcement page
9. Write the announcement and hit submit	10. Display new announcement on the group's announcement page

32. As a group admin, I would like to remove announcements.

Case: As Group Admin Remove Announcements	
Action	**System Response**
1. Navigate to the announcements page	2. Check if the user is an admin if admin, display delete announcement button
3. Click 'Delete' on one of the groups announcements	4. Display a pop up box confirming announcement deletion
5. Confirm deletion of announcement	6. Display pop up box saying that the announcement has been deleted
	7. Remove announcement from the announcements page

33. As a group admin, I would like to be able to add non-rooted members.

Case: As Group Admin/Moderator Add/Edit Info for Non-rooted Members	
Action	**System Response**
1. Click 'Edit' on a non-rooted member's profile	2. Redirect to the add/edit page for the specific user
3. Input name, title, involvement, and profile picture	4. Inputted data will be displayed on screen
5. Click 'Save'	6. Newly updated profile data will now be displayed on the non-rooted user's profile

34. As a group admin, I would like to be able to approve or reject announcement requests.

Case: As Group Admin Approve or Reject Announcement Requests	
Action	**System Response**
1. On the admin dashboard, click the 'Announcement Requests' tab	2. Display all announcement requests
3. Click approve on an announcement	4. Display a popup saying that the announcement has been confirmed and will be displayed

	5. Display this announcement on the tree's announcements page
3. Click reject on the announcement	4. Display a popup saying that the announcement has been rejected

35. As a group admin or moderator, I would like to be able to edit our about page

Case: As Group Admin/Moderator Edit Our About Us Page	
Action	**System Response**
1. Click the 'About' tab	2. Redirect to the 'About' page
3. Hit the edit button	4. The admin/moderator should be shown a text box in which they can edit the info on the about page
5. Click 'Submit'	6. The about page is updated and the new info should be displayed

36. As a group admin, I would like to be able to kick a member out of the group.

Case: As Group Admin Kick a Member from a Group	
Action	**System Response**
1. Click the 'users' tab on the admin dashboard	2. Display the 'users' tab which shows all users in that group
3. Click the 'kick' button next to a user's username	4. Display a popup asking for confirmation on kicking that user
5. Confirm selection to kick this user from the group	6. Display a popup confirming that this user has been kicked from the group
	7. Remove this user from the group entirely

37. As a group admin, I would like to be able to make my group public or private

Case: As Group Admin Make My Group Public or Private	
Action	**System Response**
1. Click 'Settings'	2. Redirect to the settings page for the group
3. Find the display settings for the group and choose either public or private	4. The chosen setting should be displayed
5. Click 'Submit'	6. The group should now be properly set as public or private

38. As a group admin, I would like to be able to visibly establish a distinction between non-rooted members and rooted members

Case: As Group Admin/Moderator Visibly Distinguish Between Non-rooted Members and Rooted Members	
Action	**System Response**
1. Click 'Home' on the group page	2. Redirect to the main page of the group
3. Look at both rooted and non-rooted members	4. Rooted and non-rooted members should be distinguishable based on the colored ring around their picture

39. As a rooted member of a group, I would like to be able to add/edit my involvement/year.

Case: As a Rooted Member Add/Edit My Personal Info	
Action	**System Response**
1. Click 'Edit Profile' on the group page	2. Redirect to 'Edit Profile' page
3. Edit desired information (name, title, bio, contact info, etc)	4. Write to database
	5. Display new changes

40. As a member of a group, I would like to be able to upload photos to my page within the

group

Case: As Group Member Upload Photos to My Group Page	
Action	**System Response**
1. Click 'Edit Profile' on the group page	2. Redirect to 'Edit Profile' page
3. Click on 'Change Picture'	4. Open upload panel
5. Select photo to upload	6. Write to database
	7. Display new changes

41. As a member of a group, I would like to be able to request to the group moderation team that certain non-members be invited to the group

Case: As Group Member Request Non-Members to Be Invited to my Group	
Action	**System Response**
1. Click "Make a Request"	2. Redirect to "Make a Request" page
3. Click "Request new member"	4. Member request panel is opened
5. Input desired user email	6. Request is generated
	7. Request is sent to moderator pool

42. As a group member, I would like to be able to request for an announcement to be displayed to the group admin team.

Case: As Group Member Submit Photo Upload Requests	
Action	**System Response**
1. Click 'Request Announcement' on the group's tree page	2. Display a form for entering a proposed announcement
3. Enter information for announcement and hit submit	4. Display a popup confirming that the request has been sent
	5. Display this request on the admin's announcement requests page

43. As a group member, I would like to be able to anonymously submit messages to the group moderation team

Case: As Group Member Anonymously Submit Messages to Group Moderators	
Action	**System Response**
1. Click "Make a Request"	2. Redirect to "Make a Request" page
3. Click "Contact Moderators"	4. Moderator contact panel is opened
5. Check "I wish to remain anonymous" (default)	7. Message is added to database
6. Compose message and click "Send"	7. Message is sent to moderator pool

44. As a group admin, I would like to remove photos from the group photos page.

Case: As Group Admin, Remove Photos from Group Photos Page	
Action	**System Response**
1. Navigate to the 'Group Photos' Page	2. Check if the user is an admin or not, if so show removal buttons
3. Click 'Remove' on a photo	4. Display a popup box confirming removal of this photo
5. Hit confirm on the popup	5. Display a popup saying that the photo has been removed
	6. Remove the photo from the groups photo page

Replaced User Stories

Backlog ID	Previous User Story	New User Story
32	As a group admin or moderator, I would like to be able to adjust the tree structure of my group.	As a group admin, I would like to add announcements.
31	As a group admin or moderator, I would like to be able to upload a custom image as a banner to the top of my group page.	As a group admin, I would like to remove announcements.
34	As a group admin or moderator, I would like to be able to approve photo upload requests for the group photo library.	As a group admin, I would like to be able to approve or reject announcement requests.
37	As a group admin or moderator, I would like to have a user interface for adding/editing items on our group timeline page.	As a group admin, I would like to be able to kick a member out of the group.
43	As a group member, I would like to be able to submit photo upload requests for the group photo library.	As a group member, I would like to be able to request for an announcement to be displayed to the group admin team.