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Link Sharing

Shashank Somvanshi , Sudarshan Patidar , Yogesh Vishnole

Acropolis institute of technology and research,Indore.India
yogeshvishnole@gmail.com , sudarshanpatidar8@gmail.com , somvanshishashank29@gmail.com

Abstract

In the world of World Wide Web there is no shortage of content. Everyone is saying content is king. We get A to Z of a subject as we type one or two letters of the word in the googlesearch . So we all understand that we can learn all the stuff in a matter of seconds because we have so much content available . But there is big gotcha in this good story , For proper learning of things we have to any how keep track of resources on web , sometimes we get a very good resource of learning but after some days (because of any vacation) we are not able to find it and it feels very bad , so that's why we form Link Sharing.Techniques we are going to use to implement it.The client-server model, or client-server architecture, is a distributed application framework dividing tasks between servers and clients, which either reside in the same system or communicate through a computer network or the Internet. The client relies on sending a request to another program in order to access a service made available by a server. The server runs one or more programs that share resources with and distribute work among clients.Web development or web application frameworks refer to a set of resources and tools available to software and web developers. These frameworks give web developers the ability to build and manage web applications, web services and websites.

Key-Words: -Web , Search , Story.

Introduction

In this project we are going to provide a solution for organising the web resources by storing the links of the resources of a particular type (as decided by the user) together , so that user can find that resources any time , anywhere start referring to them without any hustle.. The above mentioned feature is the main rationale of the project , but we are going to enhance the project by implementing the non-functional requirements in the best possible way . For instance, we are going to implement the following functionalities.

Problem Formulation

So for addressing the problem we are going to take the following concrete steps.

1. Develop the sleek web UI that is targeted to the user for interacting with the system and it is a very important part of this project because if the user didn't like the interface then he/she might not even try to understand why it is here and what problem it solves.

2. To develop an infrastructure so that the system can run with zero downtime , with the help of modern infrastructure as code tools like cloud infrastructures like AWS. The main services we are going to need are

a. Storage service

b. Email service for the user engagement

c. And the servers for continuous running of the site. So all these help end users to use the system in a happy and tension free manner , without worrying about data loss , data sharing etc

Literature Review

Content management (CM) is the process for collection, delivery, retrieval, governance and overall management of information in any format. The term is typically used in reference to administration of the digital content lifecycle, from creation to permanent storage or deletion. The content involved may be images, video, audio and multimedia as well as text.

Content management process

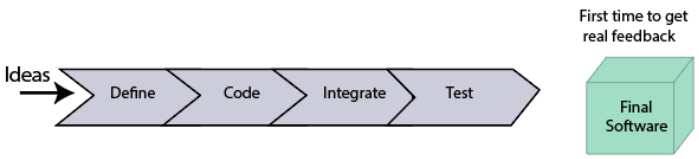
Content management practices and processes can vary by purpose and organization. This can lead to differences in steps or terminology.The stages of the content management lifecycle are:
Organization: The first stage where categories are created, taxonomies designed and classification schemes developed.
Creation: Content is classified into architectural categories.
Storage: Content format and storage decisions are made based on ease of access, delivery, security and other factors dependent on the organization's needs.
Workflow: Rules are designed to keep content moving through various roles while maintaining consistency with the organization's policies.
Editing/Versioning: This step involves managing multiple content versions and presentation changes.
Publishing: The stage where content is delivered to users, which can be defined as website visitors or internal publishing via the Intranet for employees.
Removal/Archives: The final stage where content is deleted or moved to an archive when it is infrequently accessed or obsolete. So inshort Link Sharing is the end product of content management techniques

As we are college students and we identify the problem solved by these project from among the students only , so in our early brainstormings it seems to us that our intended audience will be students , but as we made more research and study the existing systems regarding the problem we find that these type of systems are used by a large amount of professional from various fields , so that's why we understand the generic audience of the user and try to accommodate it , but from the existing systems we get more super insight that the system we can make generic etc but besides that vast majority of users are coming only from certain from professional grounds like computer science , professors etc because they are very aware and fond of technology so they find it easier to use this systems . According to all study mentioned above out main target audience will be only some time of professional and students that will be-- 1. Computer Science professionals 2. Teachers 3. College students

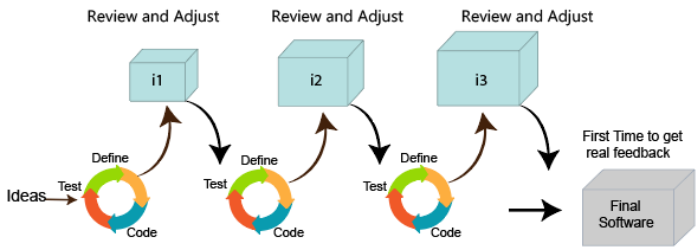
Methodology

We make use of agile methodology for development and research of the concepts of the underlying technology ,
Following is some details of the technology –

An agile methodology is an iterative approach to software development. Each iteration of agile methodology takes a short time interval of 1 to 4 weeks. The agile development process is aligned to deliver the changing business requirement. It distributes the software with faster and fewer changes.
The single-phase software development takes 6 to 18 months. In single-phase development, all the requirement gathering and risks management factors are predicted initially.
The agile software development process frequently takes the feedback of workable product. The workable product is delivered within 1 to 4 weeks of iteration.

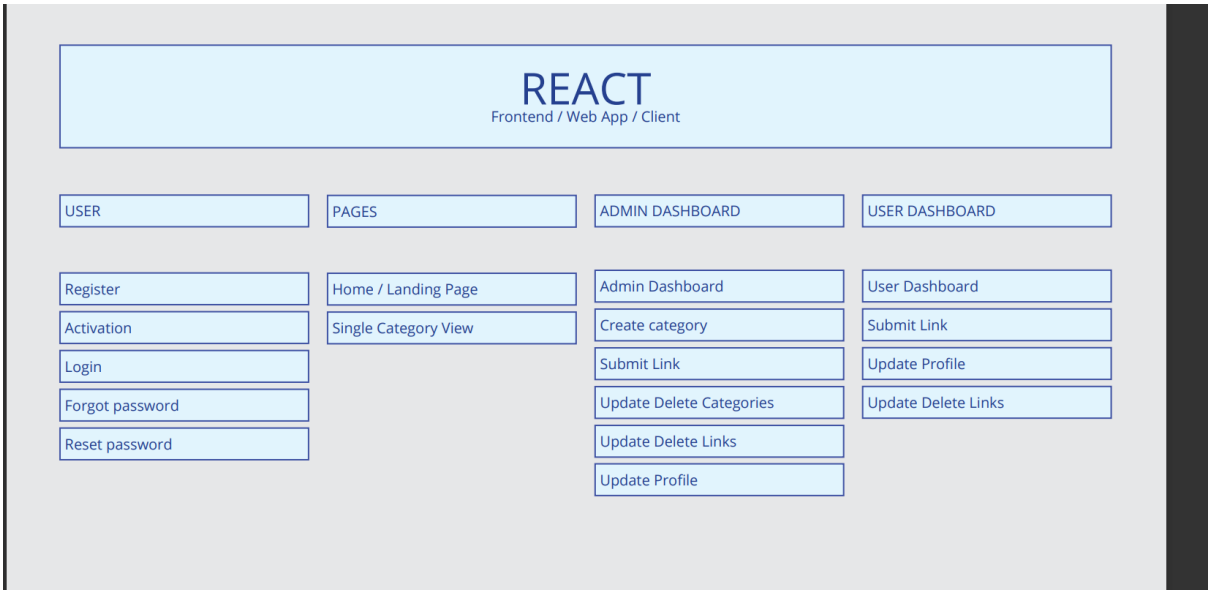


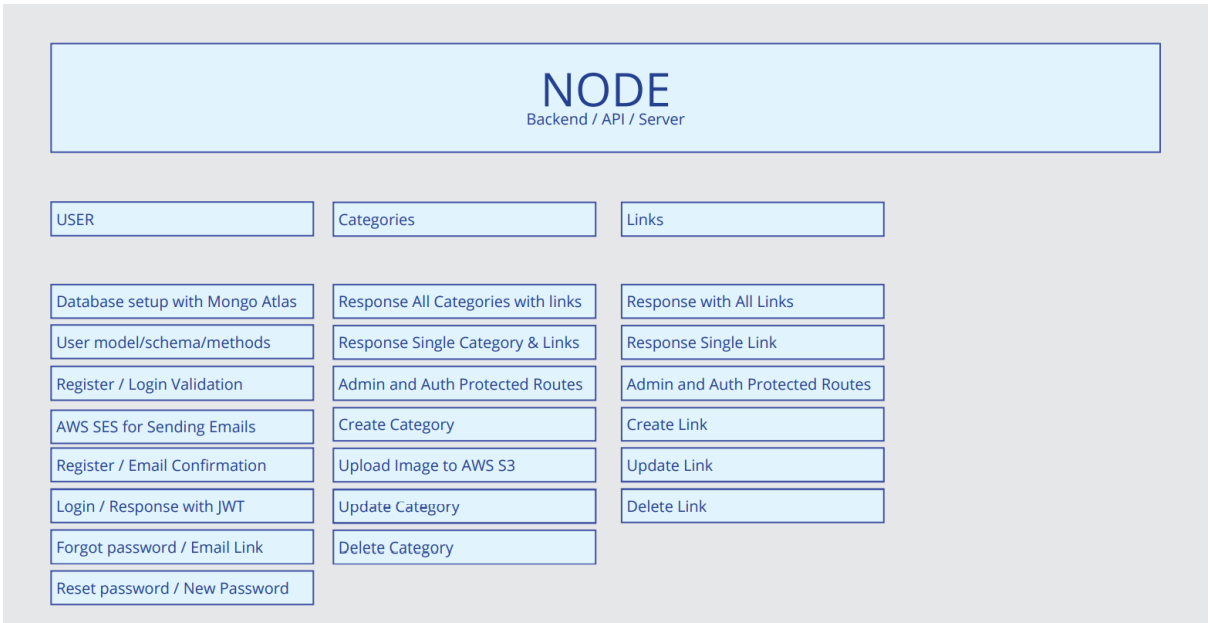
Traditional Method

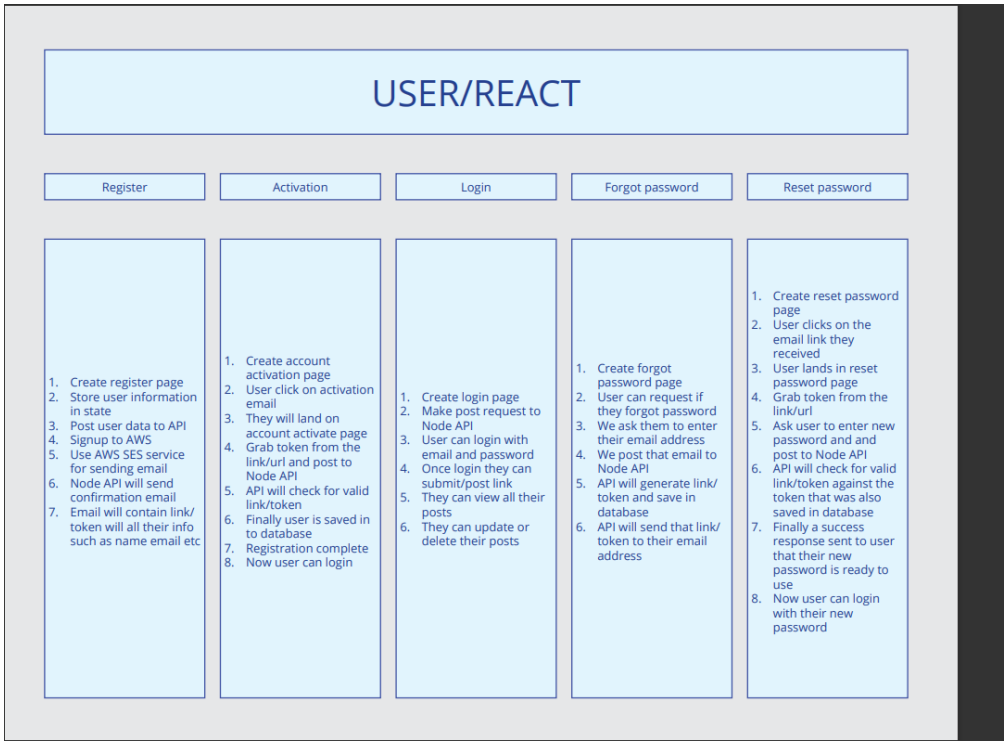


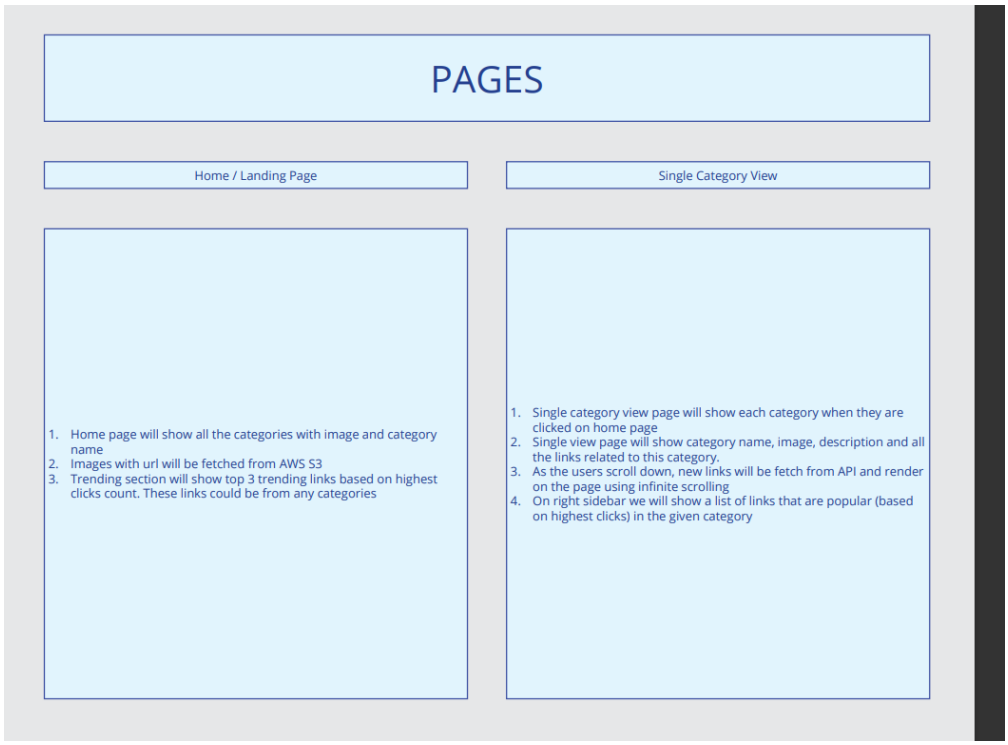
Agile Method

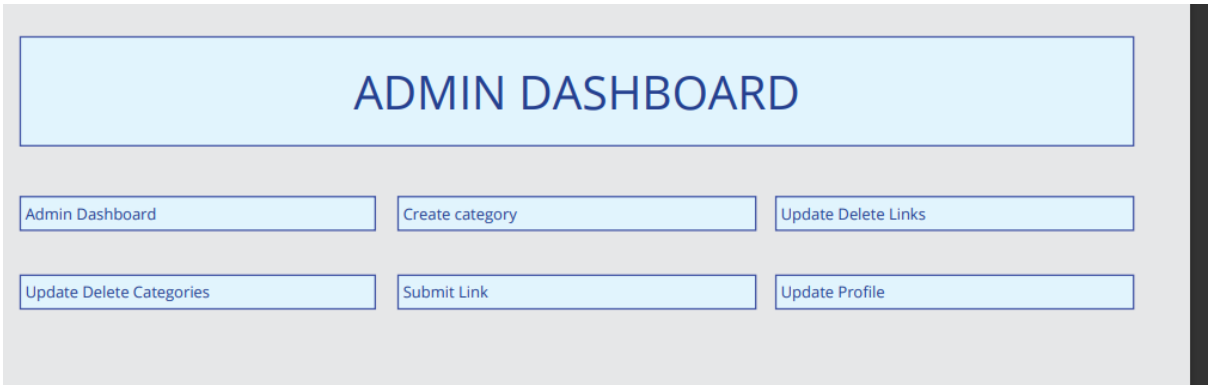
Our implementation includes following planning

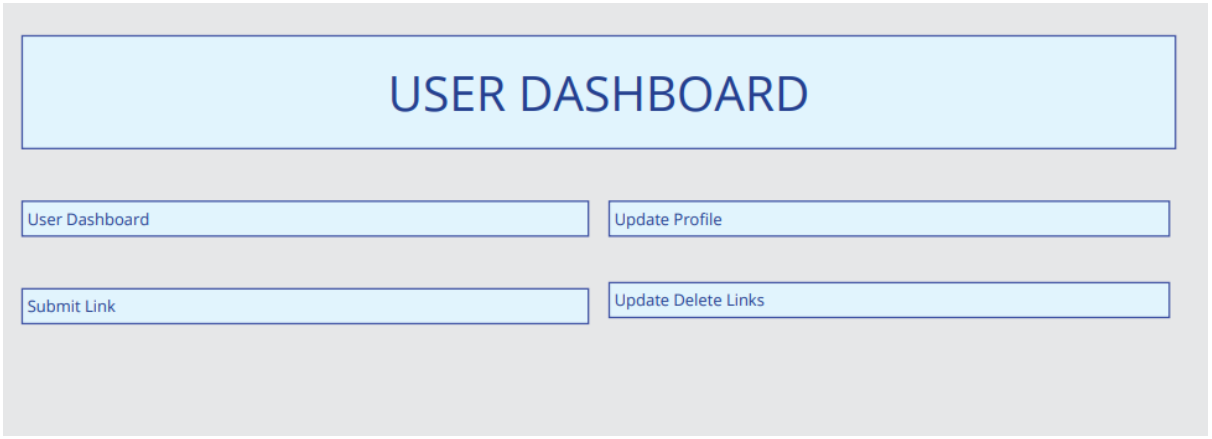

REACT
Frontend / Web App / Client
USER
Register
Activation
Login
Forgot password
Reset password
PAGES
Home / Landing Page
Single Category View
ADMIN DASHBOARD
Admin Dashboard
Create category
Submit Link
Update Delete Categories
Update Delete Links
Update Profile
USER DASHBOARD
User Dashboard
Submit Link
Update Profile
Update Delete Links


NODE
Backend / API / Server
USER
Database setup with Mongo Atlas
User model/schema/methods
Register / Login Validation
AWS SES for Sending Emails
Register / Email Confirmation
Login / Response with JWT
Forgot password / Email Link
Reset password / New Password
Categories
Response All Categories with links
Response Single Category & Links
Admin and Auth Protected Routes
Create Category
Upload Image to AWS S3
Update Category
Delete Category
Links
Response with All Links
Response Single Link
Admin and Auth Protected Routes
Create Link
Update Link
Delete Link


USER/REACT
Register
1. Create register page
2. Store user information in state
3. Post user data to API
4. Signup to AWS
5. Use AWS SES service for sending email
6. Node API will send confirmation email
7. Email will contain link/ token will all their info such as name email etc
Activation
1. Create account activation page
2. User click on activation email
3. They will land on account activate page
4. Grab token from the link/url and post to Node API
5. API will check for valid link/token
6. Finally user is saved in to database
7. Registration complete
8. Now user can login
Login
1. Create login page
2. Make post request to Node API
3. User can login with email and password
4. Once login they can submit/post link
5. They can view all their posts
6. They can update or delete their posts
Forgot password
1. Create forgot password page
2. User can request if they forgot password
3. We ask them to enter their email address
4. We post that email to Node API
5. API will generate link/ token and save in database
6. API will send that link/ token to their email address
Reset password
1. Create reset password page
2. User clicks on the email link they received
3. User lands in reset password page
4. Grab token from the link/url
5. Ask user to enter new password and and post to Node API
6. API will check for valid link/token against the token that was also saved in database
7. Finally a success response sent to user that their new password is ready to use
8. Now user can login with their new password


PAGES
Home / Landing Page
1. Home page will show all the categories with image and category name
2. Images with url will be fetched from AWS S3
3. Trending section will show top 3 trending links based on highest clicks count. These links could be from any categories
Single Category View
1. Single category view page will show each category when they are clicked on home page
2. Single view page will show category name, image, description and all the links related to this category.
3. As the users scroll down, new links will be fetch from API and render on the page using infinite scrolling
4. On right sidebar we will show a list of links that are popular (based on highest clicks) in the given category


ADMIN DASHBOARD
Admin Dashboard
Create category
Update Delete Links
Update Delete Categories
Submit Link
Update Profile


USER DASHBOARD
User Dashboard
Update Profile
Submit Link
Update Delete Links

DEPLOYMENT

Result Discussions

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1. Computer Science professionals
2. Teachers
3. College students

Conclusion

The project is more based on human cognitive needs than the physical needs it gives a mental peace that things are organised so Link sharing is a way of providing peace of mind to the web users by making their web resources (links)organised at obne place as well as they can organised according to category and they can see the most popular links in the category. In th history cognitive solutions are more successful if they are really align with the problem they are solving.

Acknowledgment

We thank the almighty Lord for giving me the strength and courage to sail out through the tough and reach on shore safely.

There are number of people without whom this projects work would not have been feasible. Their high academic standards and personal integrity provided me with continuous guidance and support.

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We express profound gratitude and heartfelt thanks to Prof. Praveen Bhanodia AITR Indore for his support, suggestion andinspiration for carrying out this project. I am very much thankful to other faculty and staff members of CS Dept, AITR Indore for providing me all support, help and advice during the project. We would be failing in our duty if do not acknowledge the support and guidance received from **Dr S CSharma**, Director, AITR, Indore whenever needed. We take opportunity toconvey my regards to the management of Acropolis Institute, Indore for extending academic and administrative support and providing me all necessary facilities for project to achieve our objectives.

We are grateful to **our parent** and **family members** who have always loved and supported us unconditionally. To all of them, we want to say “Thank you”, for being the best family that one could ever have and without whom none of this would have been possible.

References

MongoDB website and docs

React Website and docs

AWS docs

NodeJS Docs

Authors

First Author
Name ShashankSomvanshi
Qualifications BTech Computer Science
Institutes Acropolis Institute Of technology And Research Indore
Research Interests Web App Development

Second Author
NameSudarshanPatidar
Qualifications BTech Computer Science
Institutes Acropolis Institute Of technology And Research Indore
Research Interests Data Science

Third Author
Name YogeshVishnole
Qualifications BTech Computer Science
Institutes Acropolis Institute Of technology And Research Indore
Research Interests System Design And Data structures and algorithms