

# **Project report**

**Team id :NM2023TMID11237**

## **Building a website using canva**

### **1.INTRODUCTION:**

Building a website using Canva is a user-friendly and accessible way to create an attractive and functional website. Canva offers a variety of customizable templates, design elements, and easy-to-use tools, making it a popular choice for individuals and small businesses looking to establish an online presence. In this process, you'll select a template, customize it to your liking, add content, and then publish your website. Canva simplifies web design, making it accessible to those without extensive technical skills.

#### **1.1Project overview:**

1. On the Canva homepage search bar, type “website.”
2. Click on Website from the results.
3. Browse the available templates. ....
4. Change the text, photos, and colours. ....
5. To add animation to your page, text, or elements on your design, go to the toolbar above the editor and click Animate.

#### **1.2Purpose:**

Canva makes designing beautiful creative assets easy for everyone. From social media images, videos and gifs to posters, websites, booklets, multimedia presentations, and heaps more, Canva is an invaluable tool for helping you level up your design skills, even if you're just getting started.

With Canva Websites, anyone can share their ideas as a customized website in a matter of minutes. No coding required. No more static and unsearchable

documents. And no more impossible scrolling and zooming to read documents on your phone.

## **2. IDEATION PHASE:**

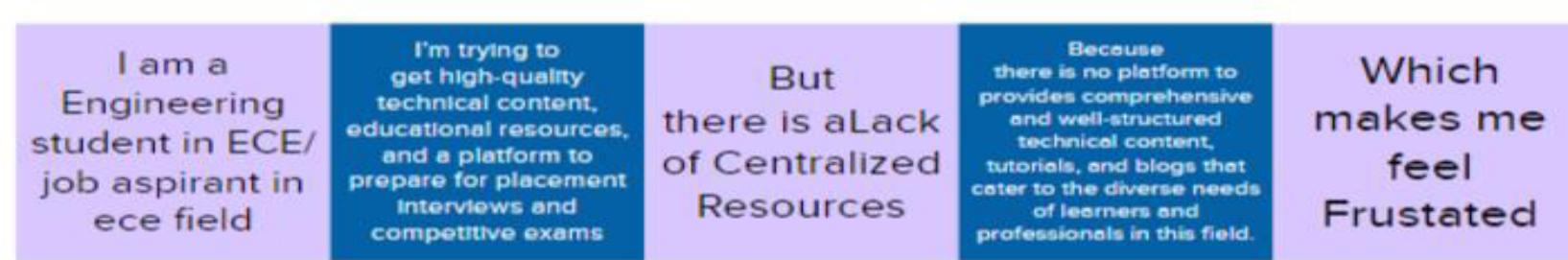
### **2.1 problem statement definition**

In today's rapidly evolving world of electronics and communication engineering, the demand for high-quality technical content, educational resources, and a platform to prepare for placement interviews and competitive exams is greater than ever before. As students, professionals, and enthusiasts seek to expand their knowledge and stay up-to-date with the latest advancements in the field, they face the following challenges:

**Information Overload:** Electronics and communication engineering is a broad discipline with multiple subfields such as electron devices and circuits, digital electronics, microprocessors, microcontrollers, and more. Finding relevant and accurate technical content can be overwhelming, leading to information overload.

**Lack of Centralized Resources:** There is a lack of a centralized platform that provides comprehensive and well-structured technical content, tutorials, and blogs that cater to the diverse needs of learners and professionals in this field.

**Difficulty in Exam Preparation:** Students preparing for placement interviews and competitive exams in electronics and communication engineering often struggle to find aptitude questions and answers tailored to their specific needs. This leads to challenges in effective exam

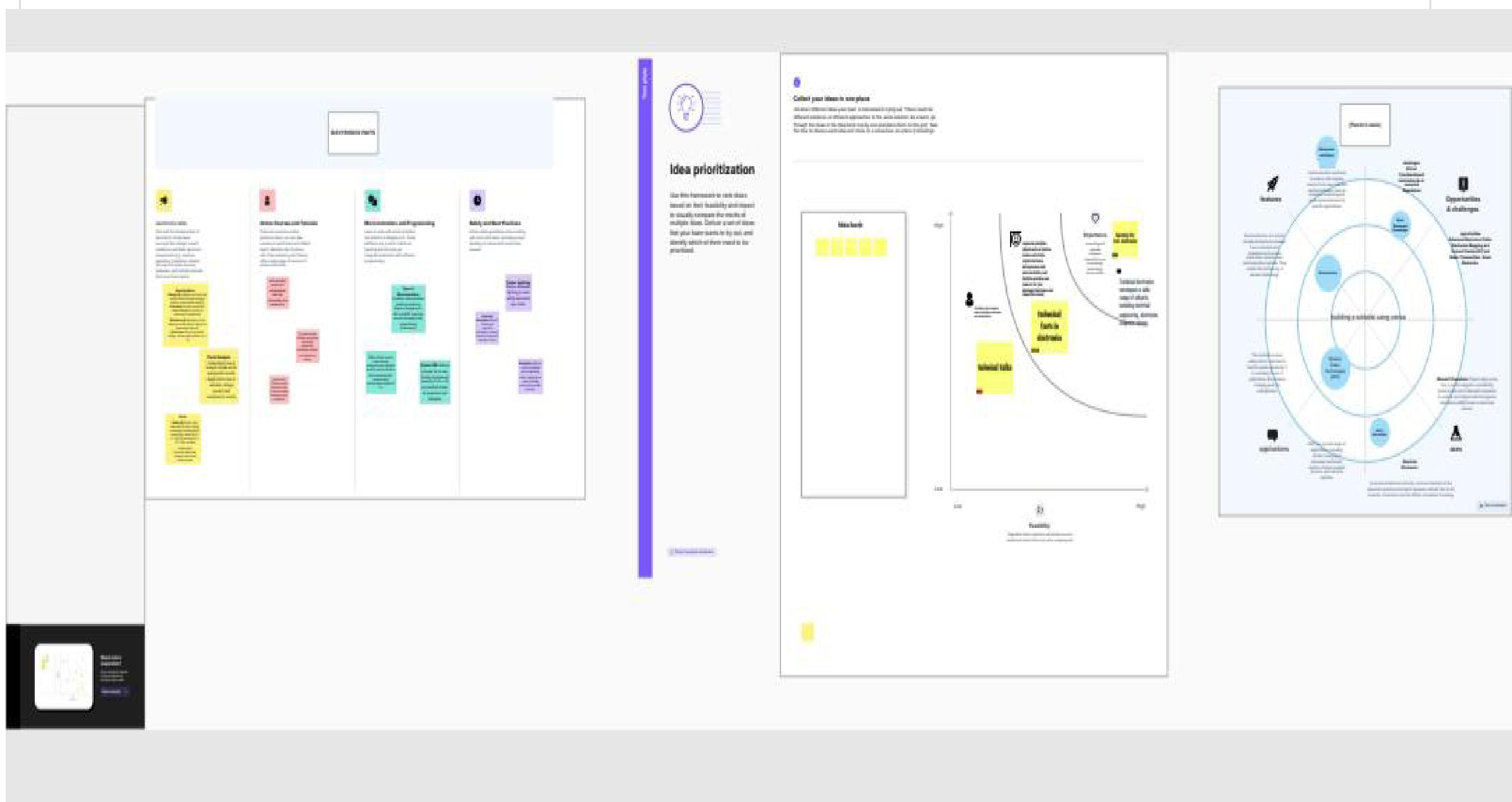


Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Engineering students in ECE	get high-quality technical content, educational resources, and a platform to prepare for placement interviews and competitive exams	there is aLack of Centralized Resources	there is no platform to provides comprehensive and well-structured technical content, tutorials, and blogs that cater to the diverse needs of learners and professionals in this field.	Frustrated
PS-2	Engineers/ Professionals in electrical and electronics and communication field	get high-quality technical content, educational resources, and a platform to update me technically in my field	Outdated Information	There is no platform to provide up-to-date information to keep the audience informed about the latest developments and trends.	Frustrated

#### BRAIN STORMING AND IDEA PRIORITIZATION TEMPLATE:

#### 2.2 Empathy map canvas :

An empathy map canvas is typically used for understanding and mapping out the thoughts and feelings of a target audience. It's not a tool for building a website but can be a helpful step in the website development process to ensure that your site meets the needs and expectations of your users.



## Brainstorming and prioritise ideas

Clearly identify the purpose of your website, such as showcasing a portfolio, promoting a business, or sharing information.

### Target Audience:

Determine your target audience and create a design that appeals to them. Consider their preferences, age, and interests.

### Site Structure:

Plan the structure of your website, including the number of pages, navigation menus, and the flow of information.

Content:

Create or gather high-quality content, such as text, images, and videos, to populate your website.

Visual Theme:

Choose a consistent visual theme using Canva's templates, fonts, and color schemes to maintain a cohesive design.

Branding:

Incorporate your branding elements, such as logos and taglines, to make your website unique and memorable.

Mobile Responsiveness:

Ensure your website is mobile-friendly, as many users access sites on smartphones and tablets.

SEO:

Optimize your website for search engines by using relevant keywords and meta descriptions.

## Contact Information:

Include clear contact information, such as a contact form, email, or phone number, for visitors to reach you.

## Social Media Integration:

Add social media sharing buttons and links to your profiles to increase your online presence.

## Testimonials and Reviews:

Showcase positive reviews or testimonials to build trust with your audience.

## Call to Action:

Strategically place call-to-action buttons or links to encourage visitors to take specific actions, such as signing up for a newsletter or making a purchase.

## Security:

Ensure the security of your website by using SSL certificates and regularly updating software.

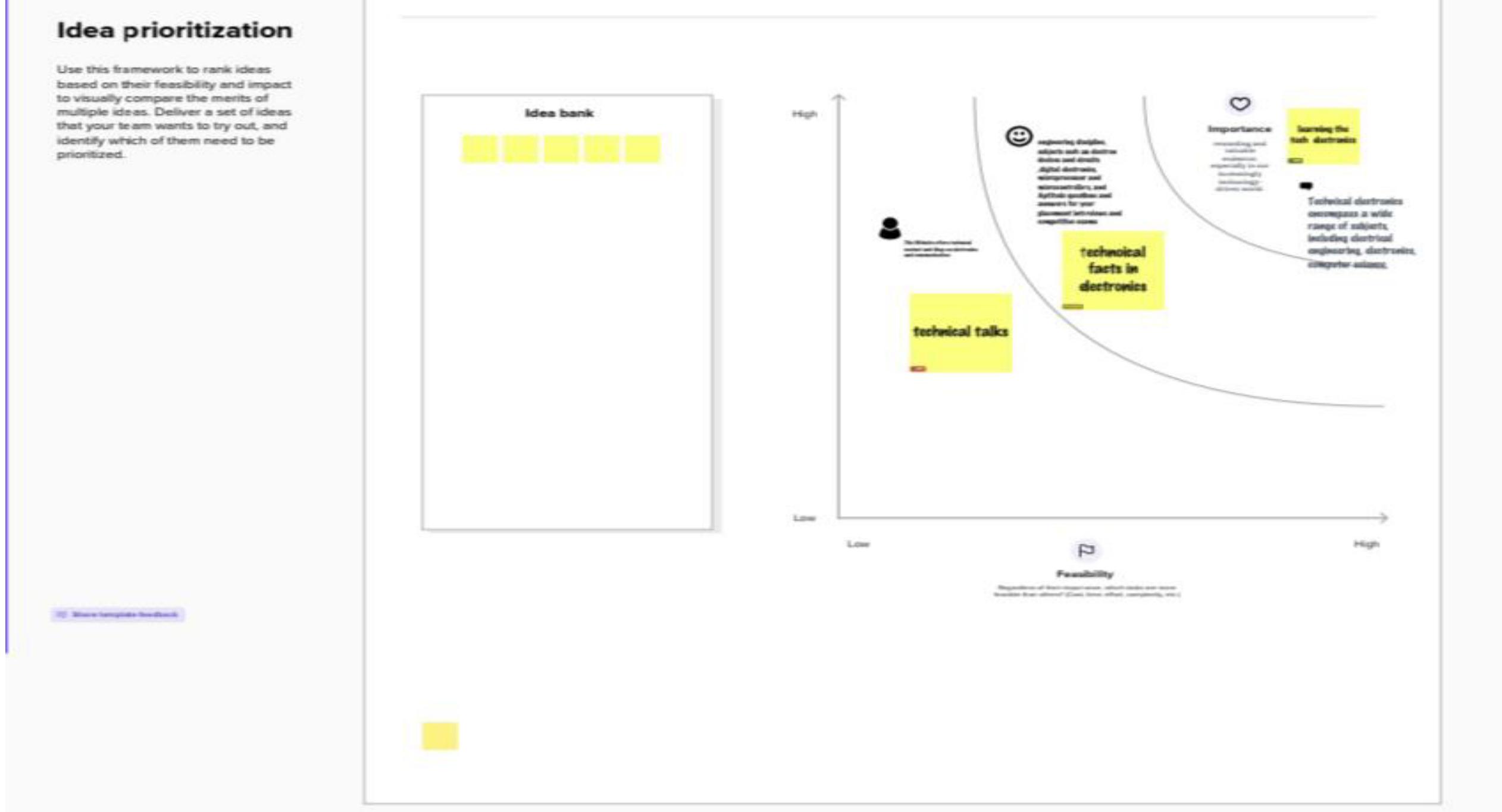
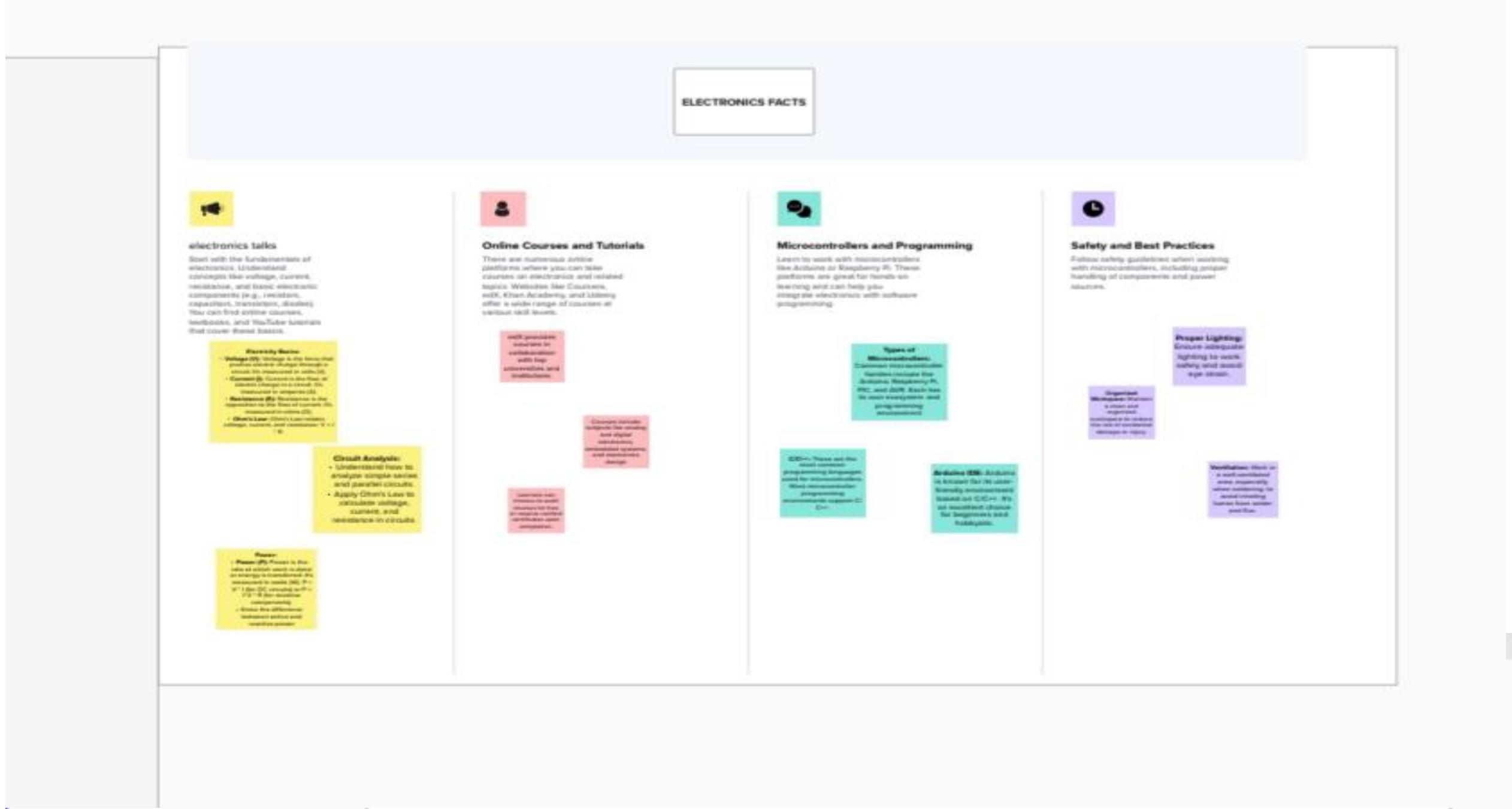
## Analytics:

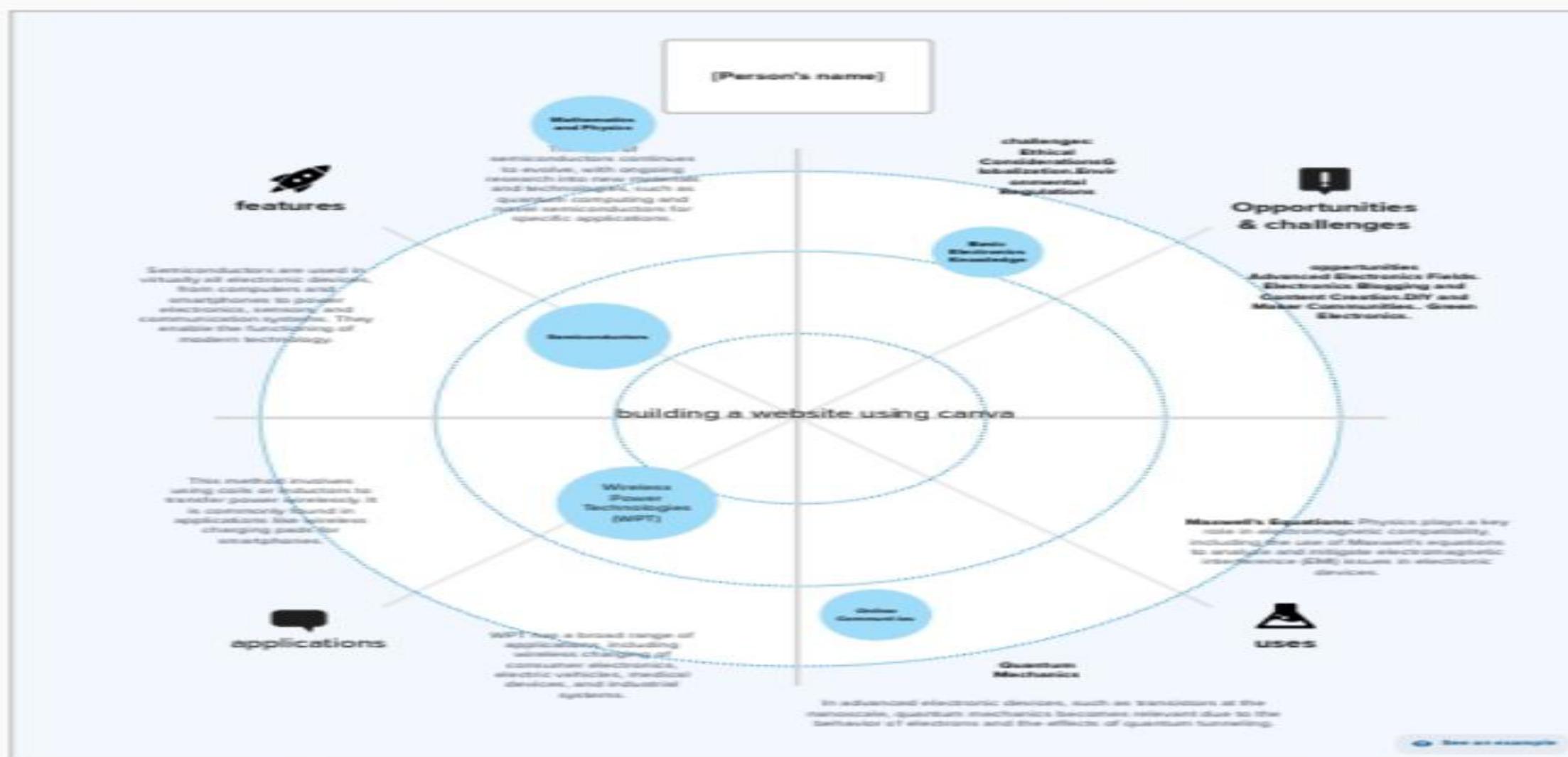
Integrate website analytics tools to track visitor behavior and gather insights for improvements.

## Mural link:

<https://app.mural.co/t/gaspiplingleakagemonitorings7166/m/gaspiplingleakagemonitorings7166/1684403615332/fc16f770d51a5ae50e9e89a8aaee8aa5f20523d3?sender=uc421fc323cab6db806043747>

## **1. Define problem statement:**





### 3. PROJECT DESIGN PHASE 1

#### 3.1 Proposed solution

Project Design Phase-I Proposed Solution Template	
Date	02-11-2023
Team ID	NM2023TMID1237
Project Name	Build a website using Canva

##### Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	"Develop a website using Canva to create an appealing, user-friendly, and functional online platform. The website should cater to [specific audience/industry] and showcase [specific products/services/information]. Ensure the site is visually engaging, easy to navigate, and optimized for various devices. The primary goal is to leverage Canva's design tools to produce a professional, aesthetically pleasing website that meets the needs of the target audience and aligns with the brand's identity."
2.	Idea / Solution description	Create a visually captivating portfolio website for creative professionals using Canva's intuitive design features. Begin by outlining the site's purpose and audience, structuring key sections like Home, About, Portfolio, Services, Testimonials, and Contact. Utilize Canva's website templates or start from scratch, focusing on a consistent color scheme, brand elements, and captivating visuals using Canva's extensive library. Ensure responsiveness across devices, integrating social media links, contact forms, and subtle animations for engagement. Export the design elements from Canva in the required formats and implement them using a website builder or platform like WordPress or Wix. Test the site thoroughly before launching and remember to periodically update the portfolio to keep it fresh and appealing for visitors. This process leverages Canva's user-friendly interface and design capabilities to craft a professional and stunning portfolio website for creative professionals without the need for extensive coding expertise.

3.	Novelty / Uniqueness	<p>Building a website using Canva offers a uniquely streamlined and accessible approach to web design. Its user-friendly interface empowers individuals without extensive design or coding skills to create visually stunning websites. The extensive library of design elements, including images, icons, and fonts, allows for a vast range of creative choices, ensuring a personalized and distinctive look. Maintaining brand consistency is simplified through easy integration of brand assets, such as logos and color schemes. Additionally, Canva's responsive design previews enable creators to visualize and optimize their website's appearance across different devices. The platform's collaborative features facilitate real-time teamwork, enabling efficient feedback and edits. By significantly reducing time and financial investment, Canva emerges as a cost-effective solution for individuals and small businesses seeking professional-looking websites without the need for professional designers or complex design software. Overall, Canva's combination of user-friendly design tools, collaborative features, and cost efficiency make it a unique and accessible option for website development.</p>
4.	Social Impact / Customer Satisfaction	<p>Building a website using Canva contributes significantly to both social impact and customer satisfaction. Canva's user-friendly platform democratizes website design, making it accessible to individuals and small businesses without extensive resources or technical skills, fostering inclusivity in the online space. This accessibility not only empowers users to express their creativity but also cultivates a sense of accomplishment and confidence. For non-profits or community initiatives, Canva's tools aid in clear communication of their mission, fostering community engagement and support. In the realm of business, Canva's visually appealing and professional websites contribute to increased customer satisfaction by enhancing user experience and engagement. Moreover, the cost-effective nature of Canva's platform enables businesses to allocate resources more efficiently, fostering sustainability and growth. Ultimately, Canva's impact lies in democratizing design, empowering users, aiding effective communication for social causes, and enhancing customer satisfaction through visually compelling websites.</p>

5.	Business Model (Revenue Model)	<p>The business model for website building using Canva centers on a combination of subscription-based services, marketplace sales, and enterprise solutions. Canva operates on a freemium model, providing basic features for free while offering more advanced functionalities through subscription tiers like Canva Pro or Canva for Enterprise, generating revenue through monthly or annual subscription fees. Additionally, Canva's marketplace allows users to sell their designs or templates, with the platform taking a commission from these sales. For larger businesses, Canva offers enterprise solutions, customizing features and charging subscription fees based on the organization's needs. This diversified revenue model encompasses subscriptions, marketplace commissions, and enterprise solutions, enabling Canva to cater to various user segments while ensuring a consistent revenue stream.</p>
6.	Scalability of the Solution	<p>Canva's scalability in website design is evident through several key aspects. Firstly, its cloud-based infrastructure enables seamless scaling to accommodate a growing user base without compromising performance. The platform's extensive template library continues to expand, catering to a diverse range of design needs as more users engage with the service. Additionally, Canva's collaborative features and enterprise solutions adapt to different team sizes, ensuring flexibility for both small groups and larger organizations. The platform's global accessibility and consistent feature development underline its capacity to meet evolving user demands on an international scale. Altogether, Canva's scalability lies in its ability to grow with its user base, continually diversify its resources, adapt to varying team sizes, and evolve to meet the changing needs of a global audience.</p>

### 3.3 solution Architecture

## Project Design Phase-I

### Solution Architecture



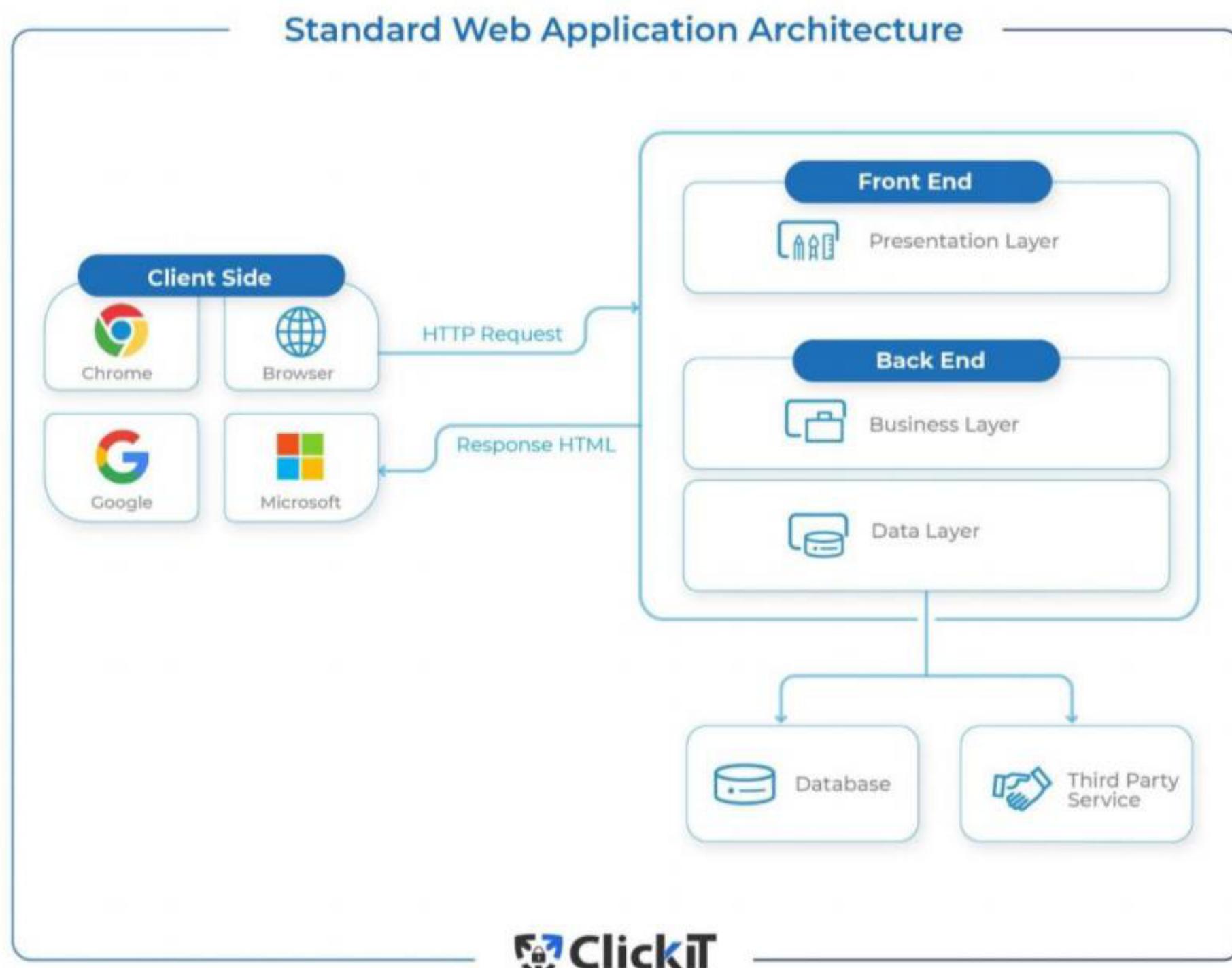
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#### Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

#### Solution Architecture Diagram:



The solution architecture for building a website using Canva typically involves a combination of Canva's design tools and other web development platforms. Here's a breakdown of its architecture:

**1. \*\*Canva's Design Interface:\*\***

Canva provides a user-friendly, browser-based design interface that allows users to create various design elements for websites. Users can access templates, design elements, and customize these components using Canva's intuitive drag-and-drop tools.

**2. \*\*Design and Asset Creation:\*\***

Canva offers the creation of visual assets required for a website, such as banners, icons, illustrations, and graphics. Users can create these assets within Canva's environment and download them in suitable formats (like PNG, JPG, or PDF) for web use.



**3. \*\*Template Customization:\*\***

Canva's pre-designed website templates can be customized according to the user's preferences. Users can modify layouts, color schemes, typography, and incorporate brand elements to ensure a consistent look and feel.

**4. \*\*Exporting Design Elements:\*\***

Once the design components are ready, users can export these assets from Canva. These exported files can then be integrated into a web development platform or content management system (CMS) to build the actual website.

**5. \*\*Integration with Web Development Platforms:\*\***

Canva-created assets, such as images, icons, or backgrounds, are integrated into platforms like WordPress, Wix, Squarespace, or custom HTML/CSS sites. Users upload their Canva-designed assets into these platforms to construct the website's visual interface.

**6. \*\*Responsive Design Considerations:\*\***

Canva allows users to preview designs in different screen sizes. The integration of these designs into web development platforms should consider responsiveness, ensuring the website looks and functions well across various devices, such as desktops, tablets, and mobile phones.

In summary, the solution architecture involves leveraging Canva for the creation of visual assets and design elements, which are then exported and integrated into web development platforms to construct the website's visual interface. The combined use of Canva and other web development tools ensures an efficient and visually compelling website creation process.

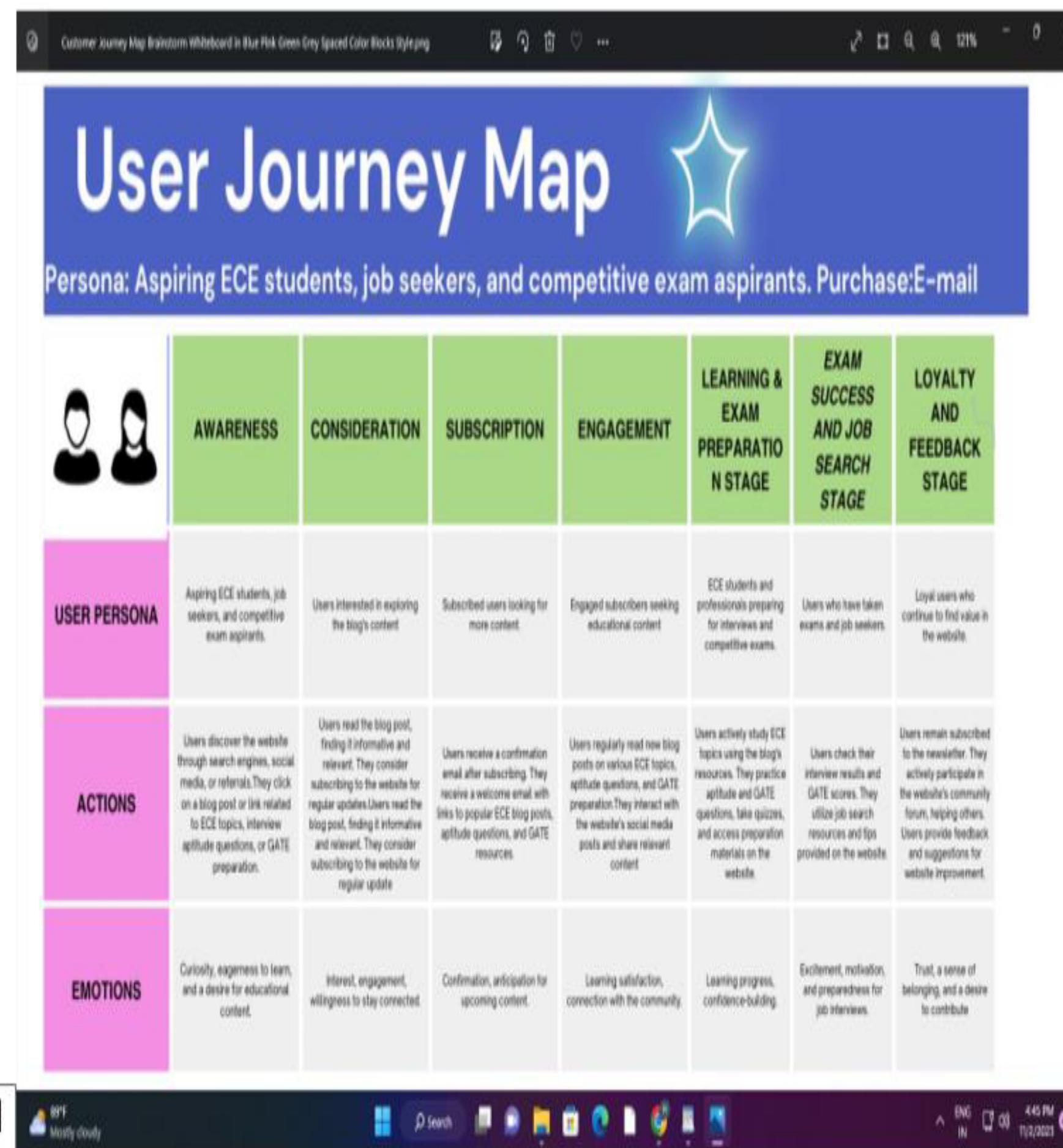
Reference: <https://technicalfacts.my.canva.site/technicalfacts>

## Project Design Phase-II

### Solution Requirements (Functional & Non-functional)

Date	03 nov 2023
Team ID	NM2023TMID11237
Project Name	BUILDING A WEBSITE USING CANVA

#### CUSTOMER JOURNEY MAP:



## **Requirement analysis(functional,operational,technical)/ flowcharts**

### **FUNTIONAL REQUIREMENTS:**

#### **1.User Registration and Authentication:**

Users should be able to register accounts, log in, and manage their profiles.

#### **2.Content Management:**

Admins should be able to create, edit, and delete blog posts.

Authors should have the ability to create and edit their own posts.

Users should be able to comment on blog posts.

#### **3.Content Categorization:**

Posts should be categorized by topics, such as electron devices, digital electronics, microprocessors, microcontrollers, and aptitude questions.

#### **4.Search Functionality:**

Users should be able to search for specific blog posts and topics.

#### **5.Social Media Integration:**

Include social sharing buttons on blog posts for easy sharing on platforms like Twitter, Facebook, and LinkedIn.

#### **6.Newsletter Subscription:**

Users should be able to subscribe to a newsletter for updates.

#### **7.User Feedback:**

Implement a feedback form for users to provide comments or report issues.

### **Operational Requirements:**

#### **1.Content Publishing Workflow:**

Define a content creation and approval process for authors and administrators.

#### **2.Content Moderation:**

Implement a moderation system to review user-generated comments and posts for inappropriate content.

#### **3.User Support:**

Provide a support system to address user queries and issues.

#### **4.Backup and Recovery:**

Regularly back up the website data to ensure data recovery in case of issues.

### **Technical Requirements:**

#### **1.Hosting and Domain:**

Choose a reliable web hosting provider and register a domain name.

#### **2.Content Management System (CMS):**

Select a CMS like WordPress to facilitate content management.

#### **3.Mobile Responsiveness:**

Ensure that the website is responsive and accessible on various devices and screen sizes.

#### **4.Database:**

Use a database system to store user data, blog content, and comments.

#### **5.Security:**

Implement security measures to protect user data and prevent unauthorized access.

#### **6 SEO Optimization:**

Optimize the website for search engines with proper metadata and SEO best practices.

#### **7.Performance:**

Ensure fast loading times by optimizing images and scripts.

#### **8.Analytics:**

Integrate tools like Google Analytics to track website performance and user behavior.

## TECHNICAL ARCHITECTURE

### 1. Front-End Architecture:

Web Development Framework: Choose a web development framework that aligns with your project requirements. Common choices include React, Angular, or Vue.js.

User Interface (UI): Develop responsive, user-friendly UI components for your website. Canva can be used to design custom graphics, banners, and featured images to enhance the visual appeal of your site.

User Experience (UX): Ensure a smooth and intuitive user experience, including easy navigation, accessibility, and mobile responsiveness.

Content Delivery: Use Content Delivery Networks (CDNs) to serve static assets, such as images and videos, efficiently to users around the world.

### 2. Back-End Architecture:

Server and Hosting: Choose a reliable hosting service that provides the necessary server resources to handle website traffic. Options include AWS, Google Cloud, or a managed WordPress hosting service.

Content Management System (CMS): Consider using a CMS like WordPress, which can simplify content creation and management.

Database: Set up a database system (e.g., MySQL, PostgreSQL) to store user data, blog posts, and comments.

Server-Side Framework: Use a server-side framework (e.g., Node.js, Ruby on Rails, Django) to handle server-side logic and API endpoints.

User Authentication: Implement user registration and authentication using technologies like OAuth, JWT, or a custom user management system.

Search Engine Optimization (SEO): Apply SEO best practices to improve search engine rankings and discoverability of your content.

### 3. Content Management:

Authoring and Editing: Use Canva for designing custom graphics and visuals to enhance your blog posts.

Workflow: Establish a content creation and approval workflow for authors and administrators.

Categorization: Create a taxonomy system to categorize and tag blog posts by topics, such as electron devices, digital electronics, microprocessors, microcontrollers, and aptitude questions.

Comments and User Interaction: Implement a system for users to comment on blog posts and interact with content.

### 4. Security:

SSL Certificate: Ensure secure data transmission by installing an SSL certificate for HTTPS.

Data Protection: Implement data security measures to protect user information and secure the database.

Firewall and DDoS Protection: Use firewalls and DDoS mitigation services to protect against cyber threats.

Regular Updates: Keep your CMS, plugins, and server software up to date to address security vulnerabilities.

### 5. Performance:

Caching: Implement caching mechanisms to improve website speed.

Image Optimization: Optimize images for web use to reduce page load times.

Content Delivery: Use CDNs to distribute content efficiently.

### 6. Analytics and Monitoring:

Analytics Tools: Integrate tools like Google Analytics to track website performance, user behavior, and traffic sources.

Error Logging: Implement error logging and monitoring to identify and address issues in real time.

### 7. Scalability:

Scalable Infrastructure: Plan for scalability as your website grows by choosing a hosting solution that can accommodate increased traffic and data.

Load Balancing: Use load balancing to distribute traffic evenly among multiple servers.

### 8. SEO Optimization:

SEO Best Practices: Implement SEO best practices, such as metadata optimization, schema markup, and XML sitemaps.

Keyword Research: Conduct keyword research to target relevant search terms in your content.

## Open source frameworks

### 1. WordPress:

WordPress is a popular open-source content management system (CMS) that's highly customizable and user-friendly. It's well-suited for blogs and content-focused websites.

You can use Canva to create custom graphics and visuals for your WordPress posts and pages.

### 2. Jekyll:

Jekyll is a static site generator that is great for creating simple and fast websites. It's especially useful for blogs.

You can design your site's layout and visuals using Canva and then integrate them into your Jekyll templates.

### 3. Hugo:

Hugo is another static site generator that offers speed and simplicity. It's suitable for blogs and technical content websites.

You can design visuals with Canva and incorporate them into your Hugo themes.

### 4. Gatsby:

Gatsby is a static site generator that uses React to build blazing-fast websites. It's a good choice for creating content-rich websites with advanced features.

Canva designs can be integrated into your Gatsby website to enhance the visual appeal.

### 5. Ghost:

Ghost is a lightweight and open-source CMS designed specifically for blogs and publications. It's known for its simplicity and user-friendliness.

Canva can be used to create custom graphics for your Ghost blog.

### 6. Strapi:

Strapi is a headless CMS that provides a flexible and customizable content management system. It's suitable for handling complex content structures.

You can design your website visuals with Canva and then integrate them into your Strapi-powered website.

### 7. Django:

Django is a high-level Python web framework that offers flexibility and scalability. It's a good choice for building complex websites with custom features.

You can use Canva for designing visual elements and then incorporate them into your Django templates.

### 8. Ruby on Rails:

Ruby on Rails is a web application framework that is known for its rapid development capabilities. It's suitable for building content-rich websites.

Canva designs can be integrated into your Ruby on Rails application for improved aesthetics.

Next.js (React Framework):

If you prefer a React-based solution, you can use Next.js to build a dynamic website with server-side rendering.

Canva visuals can be seamlessly incorporated into your Next.js project.



## **Third-party API's**

### **1. Social Media Sharing APIs:**

APIs from social media platforms like Facebook, Twitter, and LinkedIn can be integrated to enable users to easily share your blog posts and content on their social profiles.

### **2. Commenting and Discussion APIs:**

Services like Disqus and Facebook Comments offer APIs to add comment sections to your blog posts, allowing users to engage in discussions and provide feedback.

### **3. Email Marketing APIs:**

Integration with email marketing services like MailChimp or SendGrid can help you build and manage your newsletter subscription list, sending out email updates to your subscribers.

### **4. Search APIs:**

Implement a search functionality using search engine APIs like Algolia or Elasticsearch to help users find relevant content quickly.

### **5. Analytics and Tracking APIs:**

Google Analytics or Matomo (formerly Piwik) can be integrated for tracking user behavior, site performance, and traffic analysis.

### **6. Content Delivery APIs:**

Use a Content Delivery Network (CDN) like Cloudflare or Akamai to optimize content delivery for faster load times.

### **7. Payment and Donation APIs:**

If you plan to offer premium content or accept donations, consider integrating payment gateways like PayPal or Stripe.

### **8. Authentication APIs:**

Services like Auth0 or Firebase Authentication can provide secure user authentication and authorization for your website.

### **9. SEO APIs:**

SEO tools like SEMrush or Moz offer APIs to help optimize your website's SEO and track keyword rankings.

### **10. Image and Media APIs:**

Canva itself offers an API that you can use to create, edit, and manage custom graphics and images for your website directly from your Canva account.

### **11. RSS Feed APIs:**

Implement RSS feeds that users can subscribe to in order to receive updates on new blog posts.

### **12. Calendar and Event APIs:**

Integrate event calendars using services like Google Calendar or Eventbrite to announce and manage events, webinars, or workshops.

### **13. Translation APIs:**

Offer content in multiple languages with translation APIs like Google Translate or Microsoft Translator.

### **14. Video Hosting APIs:**

If you plan to include video content, integrate video hosting services like YouTube or Vimeo to embed videos in your blog posts.

### **15. Weather APIs:**

Display relevant weather information if your website's content is location-specific or weather-dependent.

### **16. Code and Syntax Highlighting APIs:**

Utilize code highlighting APIs like Prism or Highlight.js to improve the presentation of code snippets in technical blog posts.

### **17. Q&A and Forums APIs:**

Services like Stack Exchange, Discourse, or Reddit offer APIs for creating Q&A sections or forums on your website.

### **18. Educational and Learning APIs:**

Integrate APIs from e-learning platforms like Coursera or edX to offer courses and educational content related to electronics and communication engineering.

Select the APIs that align with your website's specific features and objectives. Remember to review each API's documentation and terms of use, and ensure that they provide the functionality you need while complying with data privacy and security requirements.

## **Cloud deployment:**

### **1. Choose a Cloud Service Provider:**

Select a cloud service provider that suits your requirements. Some popular options are:

Amazon Web Services (AWS)

Google Cloud Platform (GCP)

Microsoft Azure

[Heroku](#)

[DigitalOcean](#)

Consider factors such as pricing, availability in your region, and the specific services offered by each provider.

### **2. Register a Domain:**

If you haven't already, register a domain name for your website. You can do this through a domain registrar or some cloud providers offer domain registration services.

### **3. Configure DNS Settings:**

Set up your domain's DNS records to point to the cloud provider's resources. This typically involves configuring A or CNAME records to direct traffic to your website.

### **4. Create a Web Server or Hosting Environment:**

Depending on the cloud provider you choose, set up a web server or hosting environment. This can involve the following steps:

Create a virtual machine (VM) or an instance (e.g., AWS EC2, GCP Compute Engine).

Choose an operating system (e.g., Linux, Windows) and configure it.

Install a web server (e.g., Apache, Nginx) or use a platform-as-a-service ([PaaS](#)) solution if available.

### **5. Install and Configure Your CMS:**

Install and configure your chosen content management system (e.g., WordPress, Jekyll, Ghost) on your web server. Configure your CMS for your specific content and design requirements.

### **6. Secure Your Website:**

Implement security best practices:

Enable SSL/TLS certificates to provide secure HTTPS connections.

Implement a Web Application Firewall (WAF) to protect against web threats.

Regularly update your CMS, plugins, and server software to patch security vulnerabilities.

### **7. Database Setup:**

If your website requires a database, create and configure it. You can use managed database services offered by cloud providers to simplify this process.

### **8. Upload and Manage Content:**

Migrate your existing content or start creating new content. You can use [Canva](#) to design visuals and graphics for your blog posts.

### **9. Performance Optimization:**

Optimize your website's performance:

Use a Content Delivery Network (CDN) to distribute content globally.

Implement caching to reduce load times.

Optimize images for web use.

### **10. Backups and Disaster Recovery:**

Set up regular backups of your website and database to ensure data recovery in case of issues. Cloud providers often offer backup and snapshot services.

**11. Scalability:**

Configure auto-scaling if your cloud provider supports it to handle traffic spikes. This ensures your website can scale up or down based on demand.

**12. Monitoring and Analytics:**

Use cloud monitoring and analytics services to track website performance, user behavior, and error logs. This data helps in making informed decisions.

**13. Disaster Recovery Plan:**

Develop a disaster recovery plan outlining steps to follow in case of a catastrophic event or data loss. Ensure backups are securely stored off-site.

**14. Budget Management:**

Keep an eye on your cloud usage and expenses. Set up cost management tools and alerts to prevent unexpected charges.

**15. Testing:**

Before going live, thoroughly test your website to ensure all functionalities are working as expected.

**16. Go Live:**

Once everything is set up, point your domain to your cloud-hosted website and make it live.

Cloud deployment offers the flexibility to scale resources as needed, ensuring that your website remains responsive and reliable, even during high traffic periods. Regularly maintain and update your website to provide a seamless experience for your visitors.



## PROJECT DEVELOPMENT PHASE

TEAM ID: NM2023TMID11237

<b>DATE</b>	<b>2.11.2023</b>
<b>PROJECT TITLE</b>	<b>BUILDING A WEBSITE USING CANVA</b>

### 1. No.of functional features included in the solution

Content Management System (CMS): Use a CMS like WordPress to create, organize, and manage your blog content.

Domain and Hosting: Register a domain name and host your website on a reliable hosting provider.

Responsive Design: Ensure your website is responsive and user-friendly on various devices and screen sizes.

Blogging Platform: Set up a blogging platform to create and manage technical content.

SEO Optimization: Implement SEO best practices to improve your website's search engine visibility. User Registration and Profiles: Allow users to register, log in, and create profiles if you want to build a community around your blog.

Comments System: Include a comments section for readers to engage with your content.

Social Media Integration: Add social sharing buttons and connect your blog to social media profiles.

Email Newsletter Signup: Offer a subscription option for readers to receive updates.

Search Functionality: Implement a search bar for users to find specific content.

Categories and Tags: Organize blog posts using categories and tags for easier navigation.

Related Posts: Display related articles to encourage readers to explore more content.

Contact Page: Provide a contact form or email address for reader inquiries.

About Page: Introduce yourself or your team on an about page. Analytics: Use tools like Google Analytics to track website traffic and user behavior. Security:

Implement security measures to protect your website from cyber threats.

Backup and Recovery: Regularly back up your website to prevent data loss.

Speed Optimization: Optimize your website for fast loading times. Legal Pages: Include privacy policy, terms of service, and disclaimer pages to comply with legal requirements. Monetization Options: If you plan to monetize your blog, set up advertising, affiliate marketing, or e-commerce functionality.

## **2.Code- layout readability and reusability. Design in Canva:**

Design in Canva:

Use Canva to create visually appealing graphics, images, and design elements for your website. Ensure that your designs are consistent in terms of colors, fonts, and overall style.

HTML Structure:

Create a well-structured HTML layout. Consider using semantic HTML tags for better SEO and accessibility.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Your Website Title</title>
</head>
<body>
  <header>
    <!-- Place your header content here -->
  </header>
  <nav>
```

```
<!-- Navigation menu or links go here -->
</nav>
<main>
    <!-- Main content of your website, including technical blogs -->
</main>
<aside>
    <!-- Sidebar or additional content (optional) -->
</aside>
<footer>
    <!-- Footer content with links, copyright, etc. -->
</footer>
</body>
</html>
```

CSS Styles:

Create a CSS file for styling your website. Keep your CSS organized and use classes and IDs for reusability.

```
/* styles.css */
body {
    font-family: Arial, sans-serif; background-
    color: #f4f4f4;
}

header {
    background-color: #333;
    color: #fff;
}

/* Define styles for other sections and elements as needed */
```

Responsive Design:

Use CSS media queries to ensure your website is responsive on different devices.

css

Copy code

```
@media (max-width: 768px) {  
    /* Adjust styles for smaller screens */  
}
```

JavaScript (Optional):

If needed, use JavaScript to add interactivity to your website. This might include features like dropdown menus or interactive quizzes for aptitude questions.

Modular Design:

Break your content into reusable components. For example, you can create templates for blog posts, and then reuse these templates for each new blog post.

CMS Integration:

If you're using a CMS like WordPress, you can design custom templates that align with your Canva designs and use them to create blog posts. Testing and

Optimization:

Regularly test your website's layout and responsiveness on different devices and browsers to ensure readability. Optimize your images and code for faster loading times.

Accessibility:

Ensure your website is accessible to all users by following web accessibility guidelines. Provide alternative text for images, use ARIA attributes, and create a logical reading order. SEO:

Optimize your website for search engines by adding meta tags, using descriptive image alt text, and creating SEO-friendly URLs. Version Control:

If you're working in a team, consider using version control tools like Git to manage your code collaboratively. Documentation:

Keep documentation of your website's layout and design choices for future reference and team collaboration.

### **3. Utilization of algorithms,dynamic programming,optimal memory utilization.**

1. Content Management System (CMS): Use a CMS like WordPress, but also consider custom development for more control over the algorithms and dynamic content.
2. Front-End Development: HTML/CSS: Create well-structured HTML templates and use CSS for responsive and visually appealing layouts. JavaScript: Implement dynamic content loading using JavaScript. For example, use AJAX to load additional blog posts as users scroll down the page. Responsive Design: Ensure your website is responsive to different screen sizes and devices.
3. Back-End Development: Server-Side Language: Choose a server-side language like PHP, Python, or Node.js to handle server-side logic. Database: Use a database system (e.g., MySQL, PostgreSQL, or MongoDB) to store blog content, user data, and aptitude questions.  
Algorithms: Develop algorithms to optimize content retrieval and recommendation. For instance, implement algorithms to suggest related blog posts based on user preferences. Dynamic Programming: Use dynamic programming principles for optimizing processes, such as caching frequently accessed data to reduce server load and response times.
4. Memory Utilization: Caching: Implement caching mechanisms to reduce database queries. You can use tools like Redis for in-memory caching.

Data Compression: Compress images and other assets to reduce memory usage and improve page load times. Resource Minification: Minify JavaScript and CSS files to reduce the amount of memory required to load assets.

5. SEO Optimization: Implement SEO best practices to improve search engine visibility. Ensure that your site's URL structure and meta tags are optimized for search engines.

6. Accessibility: Ensure your website is accessible to all users. This is not only important for user experience but also for search engine rankings.

7. Security: Implement security measures to protect your website and user data. This includes securing your server, handling user authentication securely, and protecting against common web vulnerabilities.

8. Testing and Performance Optimization: Regularly test your website for performance issues and optimize it accordingly. Utilize tools like Google PageSpeed Insights and GTmetrix to identify areas for improvement.

9. Documentation: Keep detailed documentation of your algorithms, data structures, and codebase to facilitate future development and troubleshooting.

#### **4.DEBUGGING & TRACEABILITY**

1. Development Environment:

Set up a local development environment using tools like Visual Studio Code or other code editors. This allows you to write, test, and debug your code locally before deploying it to a live server.

2. Version Control:

Use a version control system like Git to track changes in your codebase. This helps in tracing code modifications, collaborating with others, and rolling back changes if necessary.

### 3. Debugging Tools:

Utilize browser developer tools (e.g., Chrome DevTools) to inspect HTML, CSS, and JavaScript, as well as to debug issues in the front-end.

For back-end debugging, use debugging tools available for the server-side language you are using (e.g., Xdebug for PHP or built-in debugging tools in Node.js).

### 4. Logging:

Implement comprehensive logging in your server-side code. Log critical events, errors, and important information. Logging can help trace issues in the code and troubleshoot problems.

### 5. Error Handling:

Set up proper error handling for your server code. This includes custom error messages and handling exceptions gracefully. Provide users with friendly error messages when something goes wrong.

### 6. Testing:

Write unit tests and integration tests for your code. Automated testing helps identify issues early in the development process and ensures that new code changes don't introduce regressions.

### 7. Code Reviews:

Encourage code reviews by peers or team members. Code reviews are effective in finding and fixing issues, enhancing code quality, and ensuring traceability of changes.



## **PERFORMANCE METRICS:**

**When building a website using Canva, there are several performance metrics you should consider to ensure that your website runs smoothly and effectively. Here are some key metrics to focus on:**

**Page Load Time:** Ensure that your website loads quickly to provide a good user experience. Use optimized images and minimize the use of large files.

**Mobile Responsiveness:** Make sure your website is mobile-friendly and responsive to different screen sizes and devices.

**SEO Performance:** Optimize your website for search engines by using relevant keywords, meta tags, and high-quality content to improve your search engine ranking.

**Accessibility:** Ensure your website is accessible to people with disabilities by following web accessibility guidelines (e.g., WCAG).

**Security:** Keep your website secure by using HTTPS, updating software, and implementing security best practices.

**Traffic Analytics:** Monitor website traffic using tools like Google Analytics to track the number of visitors, pageviews, and user behavior.

**Conversion Rate:** Measure how well your website converts visitors into customers or achieves its goals, such as sign-ups or sales.

**Uptime:** Keep an eye on your website's uptime to ensure it's available to users without significant downtime.

**Content Quality:** Ensure your content is relevant, well-written, and engaging to keep visitors on your site.

**Social Media Engagement:** If applicable, track social media metrics, such as likes, shares, and comments related to your website.

Remember that Canva is primarily a design tool, and you'll need to use a web hosting platform to publish your website. These performance metrics can help you assess and improve the effectiveness of your Canva-designed website once it's live.

## PROJECT

### 1.BUILDING A WEBSITE USING CANVA.

WEBSITE: <https://technicalfacts.my.canva.site/technicalfacts>

Video link:

[https://drive.google.com/file/d/1kxZDMU-nkIL4qEXanP\\_uUcGgJUOJifq\\_/view?usp=drivesdk](https://drive.google.com/file/d/1kxZDMU-nkIL4qEXanP_uUcGgJUOJifq_/view?usp=drivesdk)



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## GATE ECE QUESTION PAPERS

### GATE QUESTIONS

## REFERENCE BOOKS

**Electronic Devices and Circuit Theory** by Robert L. Boylestad; Louis Nashelsky; Franz Monssen  
**Digital design** by Morris Mano

**Microprocessor Architecture, Programming, and Applications with the 8085**  
Paperback – January 1, 2000  
by Ramesh Gaonkar (Author)

**The 8051 Microcontroller and Embedded Systems (2nd Edition) 2nd Edition**  
**Linear Integrated Circuits 5th Edition** by D Roy Choudhury (Author)

**Digital Signal Processing 6/e Paperback – January 1, 2014 by P.Ramesh Babu**  
(Author)

## NEW EMERGING TECHNOLOGY



Wireless Power Technologies (WPT) - IEEE WPT covers the interdisciplinary field of wirelessly supplying energy to electrical devices and systems ranging from exploratory R&D to mainstream products. IEEE WPT is bringing together researchers and industry professionals in a global setting to tackle technological challenges, develop corresponding standards, and provide education to advance WPT technology for humanity.

## BLOGS

SEMICONDUCTORS:

Semiconductor is a substance which has resistivity in between conductors and insulators. The resistivity of a semiconductor is less than an insulator but more than a conductor. The resistance of a semiconductor is

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## BLOGS

### SEMICONDUCTORS:

Semiconductor is a substance which has resistivity in between conductors and insulators. The resistivity of a semiconductor is less than an insulator but more than a conductor. The resistance of a semiconductor is inversely proportional to the temperature. When a suitable impurity is added to a semiconductor, its current conductivity properties change appreciably.

#### TYPES OF SEMICONDUCTOR:

Semiconductors can be classified into two types :

1. INTRINSIC SEMICONDUCTOR OR PURE OF SEMICONDUCTORS
2. EXTRINSIC SEMICONDUCTOR OR IMPURE OF SEMICONDUCTORS

#### INTRINSIC SEMICONDUCTOR:

The normal (pure) silicon and Germanium are intrinsic semiconductors. They possess all essential conducting characteristics of a semiconductor. The number of electrons present in the outermost orbit of intrinsic semiconductor is four, hence, they are termed as tetra valent. So, intrinsic semiconductors are tetra valent in nature.

#### EXTRINSIC SEMICONDUCTOR:

The process of adding impurities to an intrinsic semiconductors is known as Doping. With respect to the type of impurity added, extrinsic semiconductors are classified into two types.

- 1.N-TYPE Semiconductors
- 2.P-TYPE Semiconductors

## Talk To Us

Feel free to call, email, or hit us up on our social media accounts.

[CONTACT US](#)

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### EMAIL

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GitHub link:

<https://github.com/vaishaliravichandran01/NAANMUDHALVAN-PROJECT>

The screenshot shows a GitHub repository page. At the top, there are navigation icons for code, issues, pull requests, and more. Below the header, it displays 0 stars, 0 forks, and 1 person watching. It indicates the repository is a public one. A dropdown menu for the main branch is open. Below the branches section, a list of recent commits is shown, all made yesterday by the user 'vaishaliravichandran01'. The commits include file uploads for 'ISHWARYA V-91762114209...', 'MAHALAKSHMI.pdf', 'R.vaishali\_Assignment(20...', and 'SWETHASRI P -9176211...'. The commits are timestamped as 'yesterday'.

Commit	Timestamp
vaishaliravichandran01 committed yesterday	yesterday
ISHWARYA V-91762114209... committed yesterday	yesterday
MAHALAKSHMI.pdf committed yesterday	yesterday
R.vaishali_Assignment(20... committed yesterday	yesterday
SWETHASRI P -9176211... committed yesterday	yesterday

## Releases

No releases published

**DEMO Video Link:**

**[https://drive.google.com/file/d/1kxZDMU-nkIL4qEXanP\\_uUcGgJUOJifq\\_/view?usp=drivesdk](https://drive.google.com/file/d/1kxZDMU-nkIL4qEXanP_uUcGgJUOJifq_/view?usp=drivesdk)**

**GIT Hub Link:**

**<https://github.com/vaishaliravichandran01/NAANMUDHALVAN-PROJECT>**

