## CLOUD APPLICATION DEVELOPMENT GROUP 5

Project Title: PERSONAL BLOG ON IBM CLOUD STATIC WEB APPS

Phase 1: Problem Definition and Design Thinking

**Problem Definition:** 

The project is to create a personal travel blog hosted on IBM Cloud Static Web Apps. The goal is to share travel adventures, tips, and captivating photos to inspire others to explore the world and create unforgettable memories. This involves designing the blog structure, creating engaging content, setting up the IBM Cloud Static Web Apps, and ensuring ease of updating the blog.

# Design Thinking:

In the digital age, personal blogs have become a canvas for individuals to paint their unique stories and experiences. This personal blog, meticulously hosted on the robust infrastructure of IBM Cloud Static Web Apps, is a testament to the power of storytelling in the realm of travel and adventure. Spanning two comprehensive pages, this abstract delves into the intricacies of five vital components that form the foundation of this captivating platform: Content Planning, Content Creation, Website Design, IBM Cloud Setup, and Content Management.

## Content Planning:

Content Planning constitutes the initial phase, where meticulous thought is invested in structuring this digital journal. It lays the groundwork for engaging travel narratives, practical travel tips, and the curation of captivating visual content. Through the art of content planning, a

harmonious blend of words and visuals is crafted, promising to transport readers to far-flung destinations, ignite wanderlust, and impart invaluable wisdom for their own journeys.

## **Content Creation:**

Once the plan is set, Content Creation emerges as the catalyst that transforms concepts into tangible narratives. Here, the blogger weaves the intricate tapestry of travel stories, delving into the realms of creative writing, descriptive imagery, and personal anecdotes. The craft of storytelling is married to practical advice, offering readers a trove of insights on topics ranging from packing essentials to navigating the intricacies of budget travel. This section also encompasses the curation of mesmerizing photographs, each image a window into the culture, beauty, and soul of the destinations explored. These visual narratives are adorned with insightful captions, providing context and infusing life into pixels. The journey through this blog is not merely limited to content but extends to its very form.

## Website Design:

It is a pivotal aspect, where aesthetics and functionality intertwine. The design is conceived to be visually pleasing, with careful selection of color palettes, typography, and layout. It pleages to be user-friendly, with intuitive navigation, search functionalities, and responsiveness across diverse devices. The blog design, through the alchemy of HTML, CSS, and the possibility of JavaScript, aims to amplify the reader's experience, offering interactive elements that captivate and engage.

# IBM Cloud Setup:

The backbone of this digital chronicle is the IBM Cloud Setup, providing a secure, scalable, and reliable hosting environment. It assures that the blog

remains accessible and responsive, irrespective of traffic spikes or digital threats. The marriage of cutting-edge cloud technology with the art of storytelling forms the bedrock of this blog's resilience and accessibility.

## **Content Management:**

Finally, Content Management is the guardian of the blog's vitality. It embraces the responsibility of ensuring that the blog remains a dynamic and evolving entity. Regular updates, maintenance, and optimization are the watchwords in this phase. The blog's journey is perpetual, and content management is the compass that steers it through the ever-changing digital landscape. It promises readers a constant stream of fresh narratives, timely advice, and new perspectives.

In summation, this personal blog, residing on IBM Cloud Static Web Apps, aspires to be a digital odyssey— a tapestry of narratives, a repository of wisdom, and a visual journey. It is a testament to the fusion of technology and creativity, where the cloud serves as the canvas, and storytelling as the brushstroke. The blog beckons readers to embark on a virtual voyage, explore the world's wonders, and create unforgettable memories—one page at a time

## Phase 2: Innovation

Here's a continuous workflow for transforming our design concept into a functional personal travel blog hosted on IBM Cloud Static Web Apps:



# 1. Content Planning and Research:

- ✓ Define the blog's structure, categories, and navigation.
- ✓ Conduct keyword research for SEO optimization.
- ✓ Create a content calendar and plan blog posts.

### 2. Content Creation:

- ✓ Write engaging blog posts with storytelling elements.
- ✓ Include personal anecdotes and practical travel tips.
- ✓ Curate high-quality travel photos with descriptive captions.
- ✓ Optimize blog posts for search engines.

# 3. Website Design and Front-end Development:

- ✓ Design the blog's user interface (UI) with a focus on aesthetics and functionality.
- ✓ Implement the UI using HTML, CSS, and JavaScript.

- ✓ Ensure responsive design for various devices.
- ✓ Integrate interactive elements and user-friendly navigation.

## 4. IBM Cloud Setup:

- ✓ Sign up for an IBM Cloud account and configure account settings.
- ✓ Create a Static Web App on IBM Cloud with a chosen domain.
- ✓ Set up automated deployment of front-end code.

# 5. Deployment and Hosting:

- ✓ Deploy the front-end code and assets to the IBM Cloud Static Web App.
- ✓ Ensure secure and reliable hosting on IBM Cloud.

## 6. Content Management:

- ✓ Use a content management system (CMS) or admin panel to publish and manage blog posts.
- ✓ Regularly update the blog with fresh content.
- ✓ Monitor comments and engage with readers.

# 7. Performance Optimization:

- ✓ Monitor website performance and page load times.
- Optimize images and assets for faster loading.
- ✓ Implement performance improvements based on insights.

## 8. Security and Compliance:

- ✓ Implement security measures, including SSL certificates.
- ✓ Conduct regular security audits and keep software updated.
- ✓ Ensure compliance with data privacy regulations.

## 9. SEO and Marketing:

- ✓ Continuously optimize the website for search engines.
- ✓ Promote the blog through social media and email marketing.
- ✓ Measure and analyse website traffic and user behaviour.

# 10. User Training and Documentation:

- ✓ Create a user guide or FAQ section for readers.
- ✓ Encourage user feedback and make improvements.

# 11. Scaling and Optimization:

- ✓ Plan for scalability as the blog's readership grows.
- ✓ Regularly optimize the website's performance.

## 12. Backup and Disaster Recovery:

- √ Implement a robust backup strategy and off-site storage.
- ✓ Develop a disaster recovery plan.

## 13. Documentation and Knowledge Transfer:

- ✓ Maintain comprehensive documentation for the website.
- ✓ Conduct knowledge transfer sessions for team members or stakeholders.

This streamlined process covers all aspects of content creation, web development, hosting, and ongoing maintenance.

Here's a document that discusses the integration of social media sharing buttons, interactive maps, and comment sections to enhance user engagement and interaction:

The Personal Travel Blog hosted on IBM Cloud Static Web Apps is a platform dedicated to sharing travel experiences, tips, and captivating photos. To further enrich the user experience and engage readers effectively, we propose the integration of several innovative features, including social media sharing buttons, interactive maps, and comment sections. These enhancements will not only inspire readers but also foster community interaction and user engagement.

### Innovative Solutions

## 1. Social Media Sharing Buttons

Objective: Encourage readers to share content with their social networks, thereby increasing the blog's reach and engagement.

### Implementation:

- Add social media sharing buttons to each blog post, allowing readers to easily share articles on platforms like Facebook, Twitter, Instagram, and Pinterest.
- Customize sharing buttons to include visually appealing icons and concise sharing prompts.
- Implement Open Graph Protocol tags to ensure that shared posts display attractive images and descriptions on social media platforms.

#### **Benefits:**

- Amplifies the blog's visibility and attracts a broader audience.
- Empowers readers to become advocates for the blog's content.
- Enhances the blog's overall social presence and brand awareness.

## 2. Interactive Maps

Objective: Provide readers with a dynamic visual representation of travel destinations and itineraries, enhancing their understanding and engagement.

#### Implementation:

- Embed interactive maps within relevant blog posts, illustrating the geographic context of travel experiences.
- Utilize mapping APIs to create custom maps with markers, routes, and interactive layers.
- Include descriptions, photos, and links to corresponding blog content directly on the map.

#### Benefits:

- Offers readers an immersive and informative way to explore travel destinations.
- Helps readers plan their own trips by visualizing routes and attractions.
- Increases user engagement by providing interactive and dynamic content.

#### 3. Comment Sections

Objective: Foster community interaction, discussions, and feedback among readers and the blogger.

### Implementation:

- Enable comment sections on each blog post, allowing readers to share their thoughts, questions, and experiences.
- Implement user-friendly and spam-resistant comment forms with options for guest and registered user comments.
- Moderate comments to ensure a positive and respectful environment for discussions.

## Benefits:

- Creates a sense of community among readers and the blogger.
- Encourages user-generated content and valuable insights.
- Facilitates direct communication and feedback between the blogger and readers.

### Conclusion

By integrating these innovative features – social media sharing buttons, interactive maps, and comment sections – into the Personal Travel Blog hosted on IBM Cloud Static Web Apps, we aim to elevate the user experience, foster reader engagement, and create a dynamic and interactive platform. These enhancements will not only inspire travel enthusiasts but also facilitate valuable interactions and discussions within the blog's community.

# Phase 3: Development Part 1

Here's an overview of the structure and content for a personal travel blog on a static web page for CAD Phase 3. Website layout is designed using HTML and CSS. It has been made with engaging content, captivating photos and travel stories as described:

## 1. Home Page:

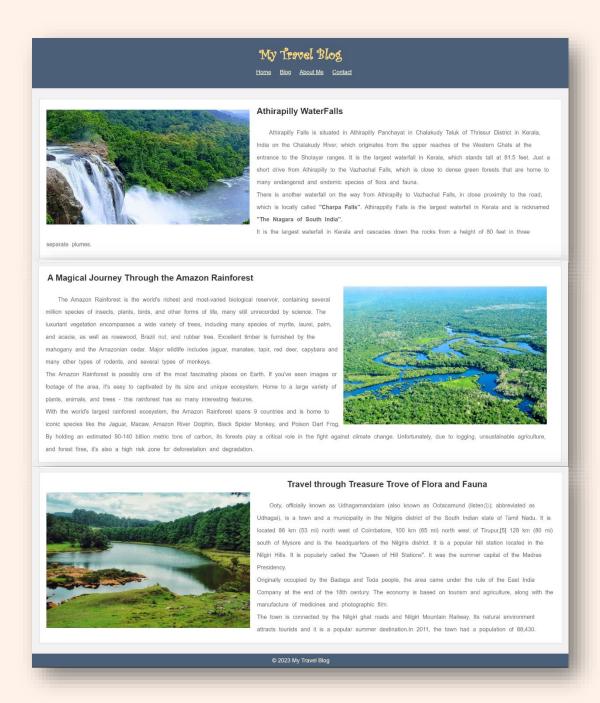
- ✓ Welcome Screen: The home page features a welcome message and the title of your travel blog.
- ✓ Menu: A navigation menu with four options: "Home," "Blog," "About Me," and "Contact."
- ✓ Footer: A footer with copyright information.



# 2. Blog Page:

- ✓ Header: A header with the blog page title.
- ✓ Blog Posts:
  - 1. Athirapilly Waterfalls:

- ✓ A blog post with information and captivating pictures about Athirapilly Waterfalls.
- ✓ You can use an `<h2>` for the post title and one or more
  `<img>` tags for images.



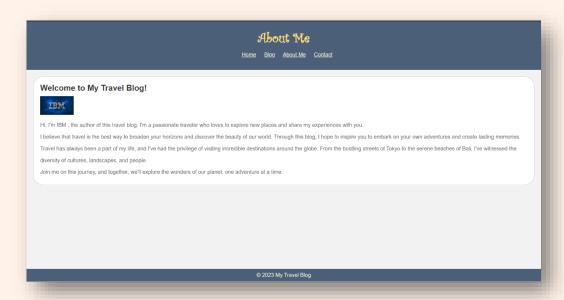
## 2. A Magical Journey Through the Amazon Rainforest:

✓ Another blog post with information and images describing your journey through the Amazon Rainforest.

- ✓ Use a title and images as in the first blog post.
- 3. Travel Through a Treasure Trove of Flora and Fauna:
  - A third blog post showcasing your adventures with flora and fauna.
  - ✓ Include images and engaging content.
  - ✓ Navigation Menu: The menu with options like "Home," "Blog," "About Me," and "Contact" remains present for easy navigation.
  - ✓ Footer: The footer provides copyright information and a link back to the home page.

## **About Me Page:**

- ✓ Header: A header with the title "About Me."
- ✓ Content: Information about you, your travel experiences, and



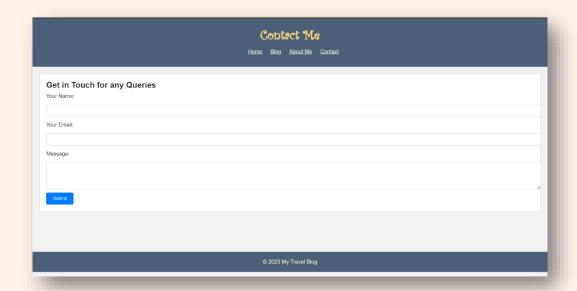
motivations for writing the blog.

- ✓ Profile Picture: An image of yourself.
- ✓ Navigation Menu: The menu with options like "Home," "Blog," "About Me," and "Contact" remains present.
- ✓ Footer: The footer provides copyright information.

# Contact Page:

- ✓ Header: A header with the title "Contact."
- ✓ Contact Form: A form that allows readers to get in touch with you.

  The form should include fields for their name, email, and a message



- ✓ Submit Button: A button for submitting the form.
- ✓ Navigation Menu: The menu with options like "Home," "Blog," "About Me," and "Contact" is available.
- ✓ Footer: The footer provides copyright information.

This is just an overview, and we could expand and customize each section with more details, images, and styling to create a fully-fledged personal travel blog.

### Here is the HTML & CSS Code.

#### index.html

```
<!DOCTYPE html>
<html lang="en">
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="styles.css">
   <title>My Travel Blog</title>
<body>
   <header>
       <h1 style="color: #FFDB7A; font-family:curlz MT; font-size: 40px;"</pre>
>Welcome to My Travel Blog</h1>
           <u1>
                  <a href="index.html">Home</a>
                  <a href="blog.html">Blog</a>
                  <a href="about.html">About Me</a>
                  <a href="contact.html">Contact</a>
           </nav>
   </header>
       <img id="img" src="personal-blog.jpg" alt="personal-blog">
   </main>
   <footer>
       © 2023 My Travel Blog
   </footer>
</body>
```

### **Styles.css** <for index.html>

```
/* styles.css */
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    background-color: #1E3658;
}
header {
    background-color: #4B5F79;
```

```
color: white;
    padding: 20px;
    text-align: center;
nav ul {
    list-style: none;
nav ul li {
    display: inline;
    margin-right: 20px;
main {
    padding: 20px;
footer {
    background-color: #4B5F79;
    color: beige;
    text-align: center;
    padding: 10px;
#img{
    margin-left: 60px;
a{
    color: beige;
```

### **Blog.html**

```
<l
               <a href="index.html">Home</a>
               <a href="blog.html">Blog</a>
               <a href="about.html">About Me</a>
               <a href="contact.html">Contact</a>
       </nav>
   </header>
       <section class="blog-post">
           <figure class="image-left" style="margin: 0px;">
               <div class="bb">
                   <img id="bb" src="aw.jpg" alt="Athirapilly WaterFalls" />
               </div>
               <figcaption>
                   <h2>Athirapilly WaterFalls</h2>
                   35px;">
                       <span style="margin-left: 35px;">Athirapilly Falls is
situated in Athirapilly Panchayat in Chalakudy Taluk of Thrissur District in
Kerala, India on the Chalakudy River, which originates from the upper reaches
of the Western Ghats at the entrance to the Sholayar ranges. It is the largest
waterfall in Kerala, which stands tall at 81.5 feet. Just a short drive from
Athirapilly to the Vazhachal Falls, which is close to dense green forests that
are home to many endangered and endemic species of flora and fauna.</span><br>
                       There is another waterfall on the way from Athirapilly
to Vazhachal Falls, in close proximity to the road, which is locally called
<span style="font-weight: bold;"> "Charpa Falls"</span>.
                       Athirappilly Falls is the largest waterfall in Kerala
and is nicknamed <span style="font-weight: bold;">"The Niagara of South
India"</span>.<br>
                      It is the largest waterfall in Kerala and cascades
down the rocks from a height of 80 feet in three separate plumes.
                   </figcaption>
           </figure>
         </section>
       <section class="blog-post">
           <h2 style="margin-left: 5px;">A Magical Journey Through the Amazon
Rainforest</h2>
           <div class="amazon">
               <img style="float: right;" src="amazon-river.jpg" alt="Amazon</pre>
Rainforest">
```

The Amazon Rainforest is possibly one of the most fascinating places on Earth. If you've seen images or footage of the area, it's easy to captivated by its size and unique ecosystem. Home to a large variety of plants, animals, and trees - this rainforest has so many interesting features.<br>

With the world's largest rainforest ecosystem, the Amazon Rainforest spans 9 countries and is home to iconic species like the Jaguar, Macaw, Amazon River Dolphin, Black Spider Monkey, and Poison Dart Frog. By holding an estimated 90-140 billion metric tons of carbon, its forests play a critical role in the fight against climate change. Unfortunately, due to logging, unsustainable agriculture, and forest fires, it's also a high risk zone for deforestation and degradation.

```
</section>
         <section class="blog-post">
           <h2 style="margin-left: 680px;">Travel through Treasure Trove of
Flora and Fauna</h2>
           <div class="amazon">
               <img src="ooty.jpg" alt="Amazon Rainforest">
           </div>
           <span style="margin-left: 35px;">Ooty, officially known as
Udhagamandalam (also known as Ootacamund (listen\textcircled{1}); abbreviated as Udhagai),
is a town and a municipality in the Nilgiris district of the South Indian
state of Tamil Nadu. It is located 86 km (53 mi) north west of Coimbatore, 100
km (65 mi) north west of Tirupur,[5] 128 km (80 mi) south of Mysore and is the
headquarters of the Nilgiris district. It is a popular hill station located in
the Nilgiri Hills. It is popularly called the "Queen of Hill Stations". It was
the summer capital of the Madras Presidency.</span><br>
```

Originally occupied by the Badaga and Toda people, the area came under the rule of the East India Company at the end of the 18th century. The economy is based on tourism and agriculture, along with the manufacture of medicines and photographic film. <br/>br>

The town is connected by the Nilgiri ghat roads and Nilgiri Mountain Railway. Its natural environment attracts tourists and it is a popular summer destination. In 2011, the town had a population of 88,430.

### Style.css < for blog.html>

```
/* Reset some default styles for consistency */
body, h1, h2, p, img, a {
   margin: 0;
   padding: 0;
/* Apply a background color and style the body text */
body {
    font-family: Arial, sans-serif;
   background-color: #f2f2f2;
   color: #333;
header {
   background-color: #4B5F79;
   color: white;
   padding: 20px;
   text-align: center;
header h1 {
   font-size: 2em;
nav ul {
   list-style: none;
nav ul li {
   display: inline;
   margin-right: 20px;
main {
   padding: 20px;
```

```
.blog-post {
    background-color: white;
    border: 1px solid #ccc;
   padding: 20px;
   margin: 10px 0;
   overflow: auto;
.blog-post h2 {
   font-size: 1.5em;
    color: #333;
.blog-post img {
   max-width: 40%;
   float: left;
   margin: 10px 20px 10px 0;
.blog-post p {
   color: #666;
.blog-post a {
   color: #007bff;
   text-decoration: none;
.blog-post a:hover {
   text-decoration: underline;
footer {
   background-color: #4B5F79;
    color: beige;
   text-align: center;
   padding: 10px;
a{
    color: beige;
```

#### about.html

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="abtstyles.css">
   <title>About Me - My Travel Blog</title>
</head>
<body>
   <header>
       <h1 style="color: #FFDB7A; font-family:curlz MT; font-size:
40px;">About Me</h1>
       <nav>
           <1115
               <a style="color: beige;" href="index.html">Home</a>
               <a style="color: beige;" href="blog.html">Blog</a>
               <a style="color: beige;" href="about.html">About</a>
Me</a>
               <a style="color: beige;"</li>
href="contact.html">Contact</a>
           </nav>
   </header>
       <section class="about-me">
           <h2>Welcome to My Travel Blog!</h2>
           <img src="IBM.jpg" alt="Author's profile picture">
           Hi, I'm IBM , the author of this travel blog. I'm a passionate
traveler
               who loves to explore new places and share my experiences with
you.
           I believe that travel is the best way to broaden your horizons
and discover
               the beauty of our world. Through this blog, I hope to inspire
you to embark on
               your own adventures and create lasting memories. <br>
               Travel has always been a part of my life, and I've had the
privilege of
               visiting incredible destinations around the globe. From the
bustling streets
               of Tokyo to the serene beaches of Bali, I've witnessed the
diversity of cultures,
               landscapes, and people.<br>
```

## abtstyles.css <for about.html>

```
body, h1, h2, p {
   margin: 0;
   padding: 0;
body {
   font-family: Arial, sans-serif;
   background-color: #f2f2f2;
    color: #333;
header {
   background-color: #4B5F79;
   color: white;
   padding: 20px;
   text-align: center;
header h1 {
   font-size: 2em;
nav ul {
   list-style: none;
nav ul li {
   display: inline;
   margin-right: 20px;
/* Style the main content area */
```

```
main {
    padding: 20px;
/* Style the "About Me" section */
.about-me {
    background-color: white;
    border: 1px solid #ccc;
    padding: 20px;
    border-radius:30px ;
.about-me h2 {
    font-size: 1.5em;
    color: #333;
.about-me img {
    max-width: 100px;
    height: auto;
    margin: 10px 0;
.about-me p {
    color: #666;
footer {
    background-color: #4B5F79;
    color: beige;
    text-align: center;
    padding: 10px;
```

#### contact.html

```
<h1 style="color: #FFDB7A; font-family:curlz MT; font-size:</pre>
40px;">Contact Me</h1>
           <l
               <a href="index.html">Home</a>
               <a href="blog.html">Blog</a>
               <a href="about.html">About Me</a>
               <a href="contact.html">Contact</a>
       </nav>
    </header>
       <section class="contact-form">
           <h2>Get in Touch for any Queries</h2>
           <form action="submit.php" method="post">
               <label for="name">Your Name:</label>
               <input type="text" id="name" name="name" required</pre>
autocomplete="off">
               <label for="email">Your Email:</label>
               <input type="email" id="email" name="email" required</pre>
autocomplete="off">
               <label for="message">Message:</label>
               <textarea id="message" name="message" rows="4" required
autocomplete="off"></textarea>
               <button type="submit">Submit
           </form>
       </section>
    </main>
    <footer>
       © 2023 My Travel Blog
    </footer>
</body>
</html>
```

### cntstyles.css <for contact.css>

```
/* Reset some default styles for consistency */
body, h1, h2, form, label, input, textarea, button {
    margin: 0;
    padding: 0;
}
```

```
/* Apply a background color and style the body text */
body {
   font-family: Arial, sans-serif;
    background-color: #f2f2f2;
    color: #333;
/* Style the header, including the navigation menu */
header {
   background-color: #4B5F79;
   color: white;
   padding: 20px;
   text-align: center;
header h1 {
   font-size: 2em;
nav ul {
    list-style: none;
nav ul li {
   display: inline;
   margin-right: 20px;
/* Style the main content area */
main {
   padding: 20px;
/* Style the contact form section */
.contact-form {
   background-color: white;
   border: 1px solid #ccc;
   padding: 20px;
.contact-form h2 {
   font-size: 1.5em;
    color: #333;
form label {
   display: block;
   margin: 10px 0;
```

```
form input,
form textarea {
   width: 100%;
   padding: 10px;
   margin: 5px 0;
   border: 1px solid #ccc;
   border-radius: 5px;
form button {
   background-color: #007bff;
   color: white;
   border: none;
   border-radius: 5px;
   padding: 10px 20px;
   cursor: pointer;
/* Style the footer */
footer {
   background-color: #4B5F79;
   color: beige;
   text-align: center;
   padding: 5px;
   margin-top: 100px;
a{
    color: beige;
```

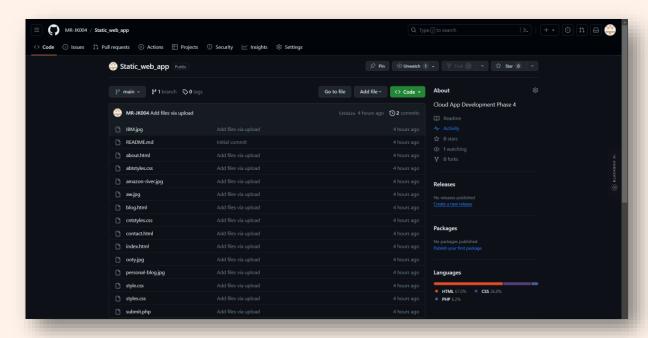
# Phase 4: Development Part 2

Creating a static web app with IBM Cloud involves several steps, including setting up a repository, creating a build pipeline, and configuring deployment options. Additionally, it has been mentioned using a static site generator like Jekyll or Hugo to manage our blog content more easily. Below are the steps to go:

## 1. Create a GitHub Repository:

Start by creating a new GitHub repository to store our project. If we're using an existing repository, make sure it contains HTML files, CSS files, and any other assets that are need.

### 2. Choose a Static Site Generator:



Select and set up a static site generator like Jekyll or Hugo. Follow the documentation to create templates for our content. These templates will make it easier to manage our blog content.



# 3. Add Template Files:

Convert our HTML content into template files that are compatible with our chosen static site generator. For example, we might convert our index.html into Jekyll's Liquid template format or Hugo's Markdown format. Customize these templates to suit our blog's design.

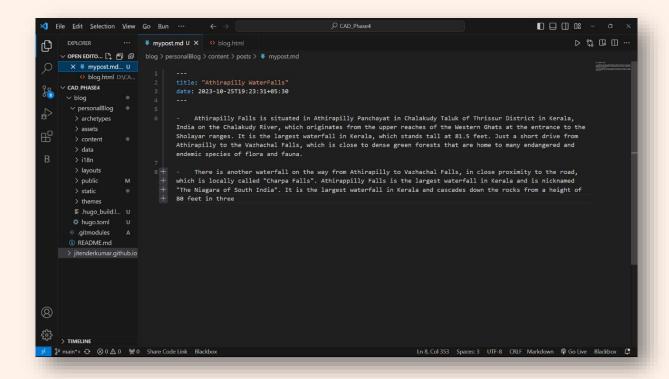


# 4. Set Up the Local Development Environment:

Install and configure the necessary tools and dependencies for our chosen static site generator. Typically, this involves installing the generator, setting up a development server, and testing our templates locally.

## 5. Build Our Blog Content:

Create blog posts, pages, or other content using the templates we've set up. This content will be converted into HTML pages by the static site generator.

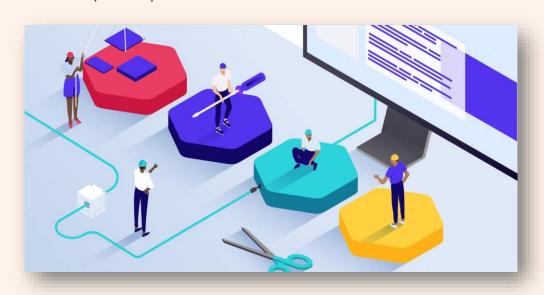


### 6. Push Code to GitHub:

Commit our code, including the template files, content, and any additional assets, to our GitHub repository.

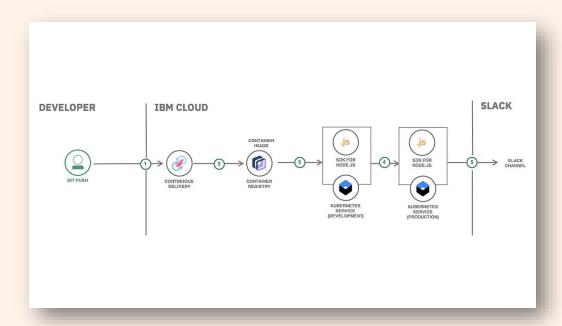
# 7. Set Up IBM Cloud DevOps Services:

- ✓ Sign in to IBM Cloud and navigate to the DevOps Services.
- ✓ Create a new toolchain.
- ✓ In the toolchain, add a Git repository as a source, connecting it to our GitHub repository.



## 8. Create a Build Pipeline:

✓ Within our IBM Cloud toolchain, create a build pipeline that includes a build stage for building our static site. Configure the build pipeline to use the appropriate build tools for our chosen static site generator (e.g., Jekyll, Hugo).

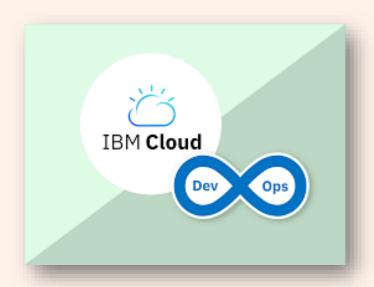


# 9. Configure Deployment Options:

- ✓ In the build pipeline, set up deployment options. IBM Cloud provides integrations with various cloud storage services (e.g., IBM Cloud) where we can host our static website files.
- ✓ Configure the deployment to automatically deploy our built website files to the chosen cloud storage service when a new build is successful.

# 10. Deploying the Blog:

✓ Trigger the build pipeline to start the build process.



✓ Once the build is complete and successful, our blog will be automatically deployed to the cloud storage service we configured.

## 11. Accessing Static Web App:

We can access our static web app via a URL provided by our chosen cloud storage service or configure a custom domain name for our blog if needed.

By following these steps, we'll have successfully set up a static web app using IBM Cloud, incorporated a static site generator to manage our content, and automated the build and deployment processes for our blog. Our blog will be accessible online, and we can easily update and manage the content using the site generator.

