Developer Guide: WOW · Wonders of the World

1. Overview

WOW (Wonders of the World) is a single-page, interactive website that showcases the New Seven Wonders of the World. It combines rich historical narratives, immersive visuals, and several utility features (search, PDF download, rating, geolocation, booking simulation) into a polished, mobile-responsive interface. This guide is intended for developers who wish to understand, maintain, or extend the codebase.

Purpose

- **Educate users about each wonder with detailed historical facts and dates.**
- **Provide a visually engaging experience via full-screen carousels and a dedicated gallery.**
- **Allow users to interact through feedback forms, location detection, and a booking demo.**
- **Demonstrate front-end techniques: scroll-snapping, dynamic modals, search filtering, and responsive design.**

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2. Technologies & Dependencies

The project uses a mix of standard web technologies and external libraries:

Technology / Library	Purpose
HTML5	Structure and semantic markup
CSS3	Custom styling, animations, responsive layout
JavaScript (ES5/jQuery)	DOM manipulation, event handling, AJAX (not used)
Bootstrap 5.3.2	Responsive grid, navbar, modal, carousel, form controls
jQuery 3.7.1	Simplified DOM traversal and event handling (loaded before Bootstrap's JS)
jsPDF 2.5.1	Client-side PDF generation for downloading wonder histories
Google Fonts	Cinzel (serif) for titles, Inter (sans) for body text
Bootstrap Icons	Icon set (e.g., globe, stars, bus, etc.)

All resources are loaded via CDN, so an internet connection is required for full functionality.

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3. File Structure

The entire application is contained in a single index.html file. All styles, markup, and scripts are embedded. External assets (images) are referenced via relative paths (e.g., China wall/...). For deployment, ensure these image folders are present and correctly named.

text

project-root/

├── index.html

├── China wall/

│ └── (image files)

├── Petra/

├── redeemer/

├── Machu/

├── Chicken/

├── Coloseum/

├── Taj Mehal/

└── (any other required image folders)

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4. Core Structure & Layout

4.1 HTML Sections

The body is divided into:

- Navbar – fixed top, with brand logo and navigation links.
- Advertise Card – bottom-left click-expandable element with travel offers.
- Booking Modal – form for demo bookings.
- Image Modal – full-screen gallery image viewer.
- Search Box – appears only on Home and Gallery pages.
- Seven Page Sections (each with id="…-section"):
    - Home (home-section) – contains the full-page scroll-snapping wonder carousels.
    - Gallery (gallery-section) – grid of all wonder images.
    - Feedback (feedback-section) – form with star rating.
    - Contact (contact-section) – contact info and geolocation button.
    - About (about-section) – project description.
    - Sitemap (sitemap-section) – simple links.
    - Queries (queries-section) – placeholder query form.
- Detail Overlay – modal that displays full history and a carousel of images when a wonder is clicked.

4.2 CSS Organization

Custom CSS follows a mobile-first approach with:

- CSS variables for theming (--accent, --dark, etc.).
- Keyframe animations for fade-in and slide-in effects.
- Media queries for responsiveness at breakpoints (991.98px, 375px, 480px).
- Utility classes like .btn-gold for consistent styling.

4.3 JavaScript / jQuery

All scripts are placed inside a $(document).ready() block. Key functions:

```
<script>
    $(document).ready(function () {
        function showSection(sectionId) {
            $('.page-section').removeClass('active-section');
            $(`#${sectionId}-section`).addClass('active-section');
            if (sectionId === 'home' || sectionId === 'gallery') {
                $('#searchBox').addClass('visible');
                $('#search').val('');
                if (sectionId === 'gallery') {
                    $('.wonder-gallery').show();
                    $('#noGalleryMatch').remove();
                }
```

- showSection(sectionId) – switches visible page sections and toggles search box.
- initHomeSidebar() – builds the right-side navigation icons for each wonder.

```
function initHomeSidebar() {
    const $sections = $('.wonder-section');
    $('#sidebarNav').empty();
    $sections.each(function () {
        const id = $(this).attr('id');
        const img = $(this).find('.carousel-item:first img').attr('src');
        if (img) {
            $('#sidebarNav').append(`<div class="nav-icon" data-target="#${id}" style="background-image: url
            ('${img}')"></div>`);
        }
    });
    $('.nav-icon').first().addClass('active');
}
initHomeSidebar();
```

- Scroll-spy logic for highlighting the active wonder icon.
- Event handlers for carousels, modals, search, rating, PDF download, etc.

```
<section class="wonder-section" id="wall" data-name="Great Wall of China">
    <div class="overlay"></div>
    <div class="carousel slide carousel-fade" data-bs-ride="carousel">
        <div class="carousel-inner">
            <div class="carousel-item active"><img
                    src="China wall/getty-images-80OWrQGTtG8-unsplash-e1734609545282.jpg" alt="Great Wall">
            </div>
            <div class="carousel-item"><img src="China wall/20.jpg" alt="Great Wall"></div>
            <div class="carousel-item"><img src="China wall/61310.jpg" alt="Great Wall"></div>
            <div class="carousel-item"><img
                    src="China wall/great-wall-china-tourists-GWOC0417-10bddbf0783644c386178f62117b2132.jpg"
                    alt="Great Wall"></div>
            <div class="carousel-item"><img src="China wall/site_0438_0035-1200-630-20251217144955.jpg"
                    alt="Great Wall"></div>
        </div>
    </div>
```

5. Key Features Explained

5.1 Home Page – Scroll-Snapping Wonder Sections

- Each wonder occupies a full viewport (height: 100vh) with a carousel of background images.

```css
.carousel,
.carousel-inner,
.carousel-item {
    height: 100vh;
}
```

- Scroll-snap (scroll-snap-type: y mandatory) ensures smooth section transitions.

```css
.scroll-container {
    height: 100vh;
    overflow-y: scroll;
    scroll-snap-type: y mandatory;
    scrollbar-width: none;
    scroll-behavior: smooth;
}
```

- A right-side navigation bar (#sidebarNav) contains circular thumbnails; clicking jumps to the corresponding wonder.

```javascript
function initHomeSidebar() {
    const $sections = $('.wonder-section');
    $('#sidebarNav').empty();
    $sections.each(function () {
        const id = $(this).attr('id');
        const img = $(this).find('.carousel-item:first img').attr('src');
        if (img) {
            $('#sidebarNav').append(`<div class="nav-icon" data-target="#${id}" style="background-image: url
            ('${img}')"></div>`);
        }
    });
    $('.nav-icon').first().addClass('active');
}
```

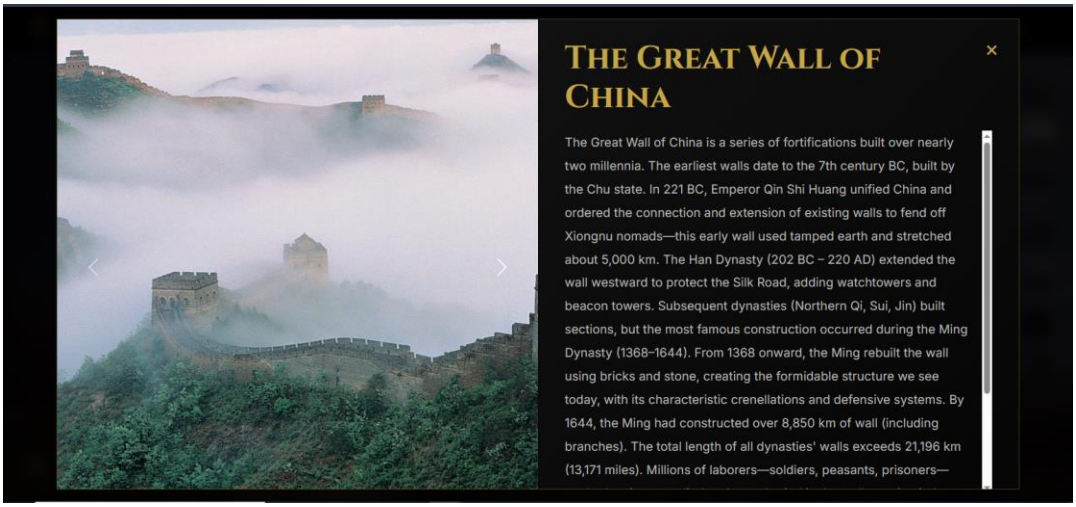
- The intro slide (first section) displays the site title with a glowing animation.

```
<!-- intro slide -->
<section class="wonder-section" id="intro" data-name="Introduction">
    <div class="overlay"></div>
    <div class="carousel slide carousel-fade" data-bs-ride="carousel">
        <div class="carousel-inner">
            <div class="carousel-item active">
                <img src="https://images.unsplash.com/photo-1506905925346-21bda4d32df4?w=1600" alt="intro">
            </div>
        </div>
    </div>
    <div class="intro-content">
        <h1>WONDER OF WORLD</h1>
    </div>
```

5.2 Wonder Detail Overlay

When a user clicks the content area of a wonder (excluding the PDF button), a full-screen overlay appears:

- Left side: a carousel of all images from that wonder's section.
- Right side: the wonder's title and the complete historical text (stored in data-full attribute).
- Close by clicking the × button or outside the card.

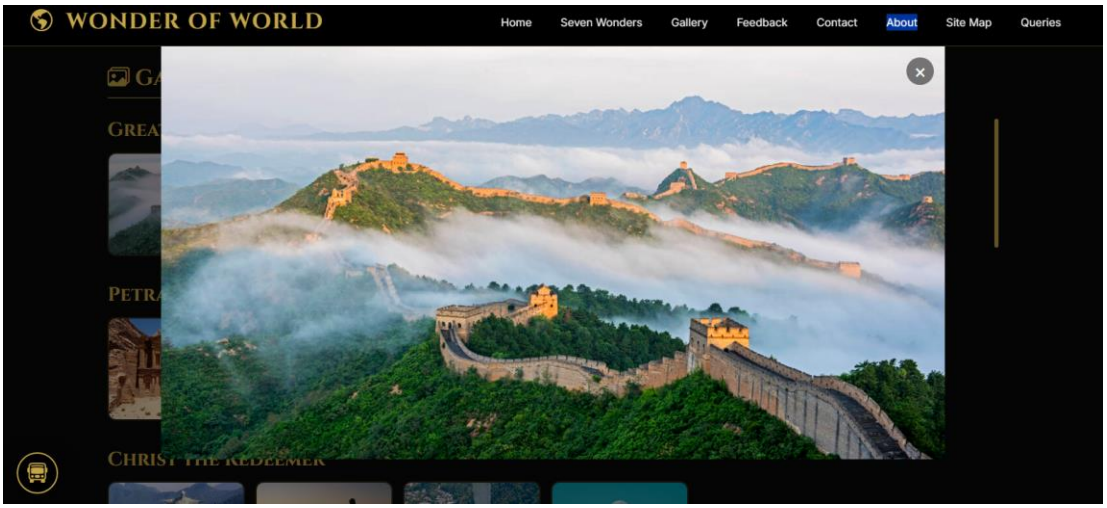


5.3 Gallery Section

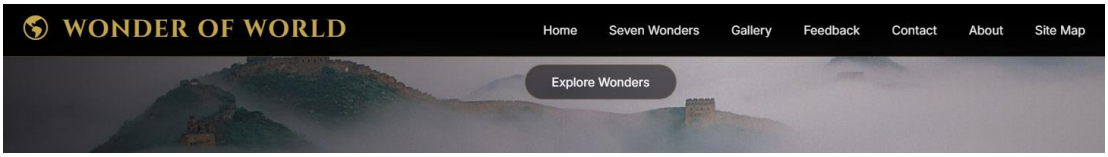
- Dynamically built from the image sources of each wonder section (function buildGallery()).

```
function buildGallery() {
    const wonderNames = [
        'Great Wall of China', 'Petra', 'Christ the Redeemer',
        'Machu Picchu', 'Chichen Itza', 'Colosseum', 'Taj Mahal'
    ];
    const wonderIds = ['wall', 'petra', 'christ', 'machu', 'chichen', 'colosseum', 'tajmahal'];
    let html = '';
    for (let i = 0; i < wonderIds.length; i++) {
        const $section = $(`#${wonderIds[i]}`);
        const images = [];
        $section.find('.carousel-item img').each(function () {
            images.push($(this).attr('src'));
        });
        if (images.length) {
            html += `<div class="wonder-gallery"><h3>${wonderNames[i]}</h3><div class="gallery-grid">`;
            images.forEach(src => {
                html += `<div class="gallery-item"><img src="${src}" loading="lazy" alt="${wonderNames[i]}
                "></div>`;
            });
            html += `</div></div>`;
        }
    }
    $('#galleryContainer').html(html);
}
```

- Images are displayed in a responsive grid; clicking any image opens the Image Modal with a larger view.

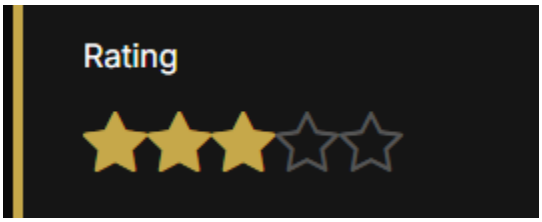


- A search box filters galleries by wonder name (case-insensitive). If no matches, a “no results” message appears.



5.4 Feedback Form with Star Rating

- Five clickable stars (Bootstrap Icons) that toggle from bi-star to bi-star-fill.




```
$('#feedbackForm').on('submit', function (e) {
    e.preventDefault();
    alert('Thank you for your feedback! (Stored locally)');
    localStorage.setItem('wow_feedback', JSON.stringify({
        name: $('#fbName').val(),
        email: $('#fbEmail').val(),
        rating: $('#starRating i.bi-star-fill').length,
        message: $('#fbMsg').val()
    }));
});
```

- On form submit, data is saved to localStorage as a JSON string (demo only).
- No server-side processing is implemented.

5.5 Geolocation (Contact Section)

- Clicking “Find my location” triggers the browser’s geolocation API.
- Latitude and longitude are displayed below the button, along with accuracy.
- Graceful fallback for unsupported browsers or denied permission.

```
$('#geoBtn').on('click', function () {
    if (navigator.geolocation) {
        navigator.geolocation.getCurrentPosition(pos => {
            $('#geoDisplay').html(`Latitude: ${pos.coords.latitude}, Longitude: ${pos.coords.longitude} (accuracy ${pos.coords.accuracy}m)`);
        }, err => {
            $('#geoDisplay').text('Location access denied or unavailable.');
        });
    } else {
        $('#geoDisplay').text('Geolocation not supported by this browser.');
    }
});
```

5.6 PDF Download

Each wonder's content area includes a "Download PDF" button. When clicked:

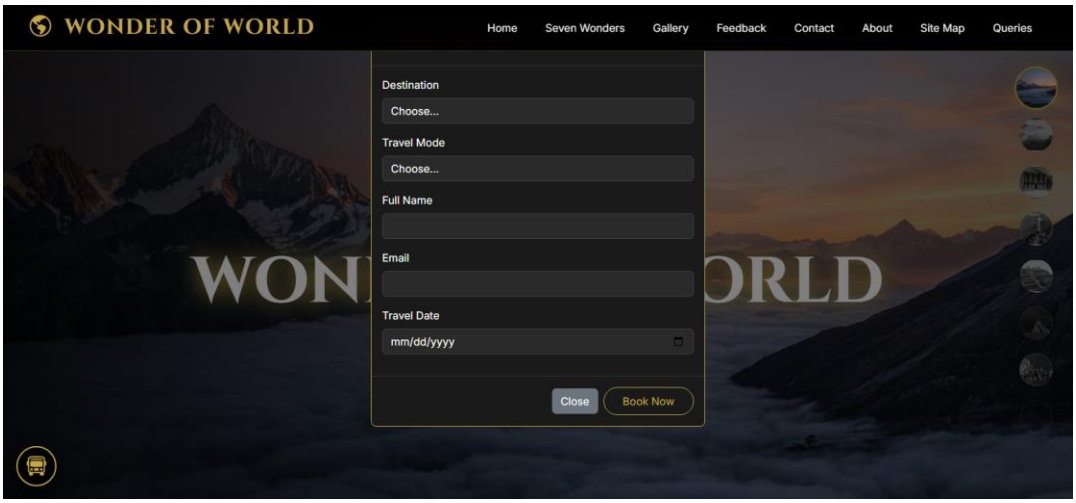
- It uses jsPDF to create a new document.

```
$(document).on('click', '.download-pdf', function (e) {
    e.stopPropagation();
    const name = $(this).data('name');
    const desc = $(this).data('desc');
    const { jsPDF } = window.jspdf;
    const doc = new jsPDF();
    doc.setFont('helvetica', 'bold');
    doc.text(name, 20, 20);
    doc.setFont('helvetica', 'normal');
    const lines = doc.splitTextToSize(desc, 170);
    doc.text(lines, 20, 40);
    doc.save(`${name.replace(/\s/g, '_')}_history.pdf`);
});
```

- The wonder's name (as a title) and full history text (from data-desc) are added.
- The PDF is saved with a sanitised filename.

5.7 Booking Modal

- Triggered by clicking the "Bus to Petra" or "Flight to Machu Picchu" links inside the expandable ad card.



- A simple form with destination, travel mode, name, email, and date.
- On "Book Now", basic validation is performed; if passed, a demo alert is shown and the form resets.

5.8 Click-Expandable Advert Card

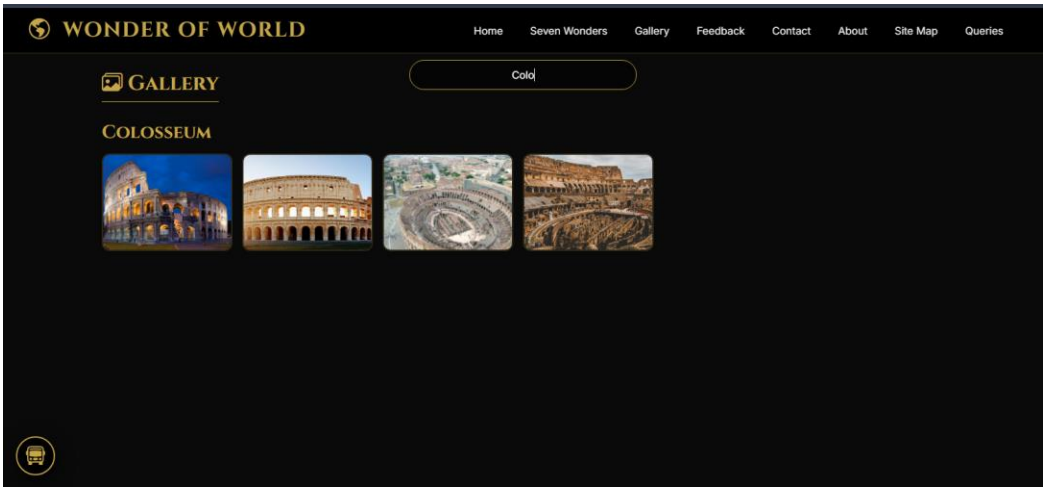
- The card in the bottom-left starts as a small circle with a bus icon.

- Clicking it expands to reveal clickable links and a discount message.

- Clicking a link opens the booking modal (via Bootstrap's modal).
- Clicking outside a link toggles the expanded state.

5.9 Search Functionality

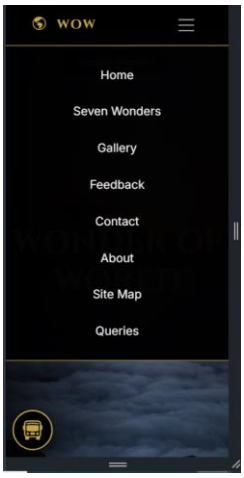
- The search box is visible only on Home and Gallery sections.
- On Home: searches wonder names and scrolls to the first matching section. If not found, the input briefly glows red.
- On Gallery: filters the gallery grid by wonder name; hides non-matching groups.



6. Responsive Design Highlights

The site adapts to different screen sizes with careful media queries:

- Navbar collapses into a hamburger menu on mobile. When opened, the dropdown covers the full width below the navbar.



- Wonder navigation (side icons) moves to the bottom of the screen and becomes a horizontal row.
- Detail overlay switches to a single-column layout (image above text) on narrow screens.
- Advertise card width reduces for very small devices (e.g., iPhone SE).
- Gallery grid columns adjust automatically (minmax(130px, 1fr) on mobile).
- Font sizes and spacing are reduced where appropriate.

All changes are implemented via CSS media queries; no separate mobile-only JavaScript is used.

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7. Customization Guide

7.1 Changing Wonder Content

Each wonder is defined inside a <section class="wonder-section"> with a unique id. To modify:

```
<!-- intro slide -->
<section class="wonder-section" id="intro" data-name="Introduction">
```

- Images: Add/remove inside the carousel. Image paths are relative; ensure the files exist.

```
<section class="wonder-section" id="wall" data-name="Great Wall of China">
    <div class="overlay"></div>
    <div class="carousel slide carousel-fade" data-bs-ride="carousel">
        <div class="carousel-inner">
            <div class="carousel-item active"><img
                    src="China wall/getty-images-80OWrQGTtG8-unsplash-e1734609545282.jpg" alt="Great Wall">
            </div>
            <div class="carousel-item"><img src="China wall/20.jpg" alt="Great Wall"></div>
            <div class="carousel-item"><img src="China wall/61310.jpg" alt="Great Wall"></div>
            <div class="carousel-item"><img
                    src="China wall/great-wall-china-tourists-GWOC0417-10bddbf0783644c386178f62117b2132.jpg"
                    alt="Great Wall"></div>
            <div class="carousel-item"><img src="China wall/site_0438_0035-1200-630-20251217144955.jpg"
                    alt="Great Wall"></div>
        </div>
    </div>
```

- Title: Edit the <h1 class="wonder-title">.

- Preview text: Change the text inside .wonder-history-preview.
- Full history: Update the data-full attribute on the .wonder-content div.
- PDF text: The data-desc attribute of the download button holds the text for the PDF. It can be identical to data-full or a shorter version.

To add a new wonder:

1. Copy an existing <section> block.
2. Change its id and data-name.
3. Update all image paths, title, preview, and data attributes.
4. Add the new wonder's name to the wonderNames and wonderIds arrays inside buildGallery().
5. Ensure the corresponding image folder exists.

7.2 Changing Styling

- Theme colors: Modify the CSS variables at the top of the <style> block.
    - --accent: gold (#c6a84a) used for highlights.
    - --dark: background black.

```
:root {
    --accent: #c6a84a;
    --dark: #0a0a0a;
    --ease: cubic-bezier(0.23, 1, 0.32, 1);
    --navbar-height: 70px;
}
```

- Fonts: Replace the Google Fonts link and update font-family in the CSS.
- Animations: Adjust keyframes (sectionFadeIn, slideFromRight, etc.) or durations.

```
.page-section.active-section {
    display: block;
    opacity: 1;
    animation: sectionFadeIn 0.4s;
}

@keyframes sectionFadeIn {
    0% {
        opacity: 0;
    }

    100% {
        opacity: 1;
    }
}
```

7.3 Updating Navigation Links

The navbar links use data-section attributes to show sections. To add a new section:

1. Create a new <section> with id="new-section" and class page-section.
2. Add a link in the navbar with data-section="new" (note: the section id must be new-section).
3. The showSection() function will handle the rest.

7.4 Customising the Advert Card

- Text & links: Edit the .full-content div inside #advertiseCard.
- Collapsed icon: Change the <i> class (e.g., bi-bus-front to another Bootstrap icon).
- Expanded width: Adjust the .advertise-card.expanded width in CSS.

7.5 Enabling Real Booking / Backend Integration

Currently, the booking and feedback forms only simulate submission. To integrate with a backend:

- Replace the alert calls with AJAX requests (e.g., using $.post).
- Add proper form validation and CSRF tokens if needed.
- For PDF download, the jsPDF library can also be used to send the generated PDF to a server.

7.6 Image Paths

All images are referenced with relative paths like China wall/.... Ensure these folders exist and contain the images. For production, you may want to use absolute URLs or a CDN. Update the src attributes accordingly.

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8. Potential Improvements & Notes

- Performance: The page loads many high-resolution images. Consider lazy-loading (already implemented via loading="lazy" on gallery images) and optimising image sizes.
- Accessibility: Add alt text to all images (currently missing in some carousel items). Ensure keyboard navigation works for modals and dropdowns.
- Browser Support: Modern browsers (Chrome, Firefox, Safari, Edge) are supported. Internet Explorer is not.
- Dependencies: All external libraries are loaded via CDN. If offline use is required, download and serve local copies.
- Code Organisation: The JavaScript is monolithic; for larger projects, consider splitting into modules. However, for a single-page demo, it remains manageable.
- Placeholder Content: Some sections (Queries, Sitemap) contain minimal content. Expand as needed.

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9. Testing & Deployment

9.1 Local Testing

- Clone or download the index.html and image folders.
- Open index.html in a modern web browser.
- All features (except geolocation, which requires HTTPS in some browsers) should work.

9.2 Deployment

- Upload the index.html file and all image folders to your web server.
- Ensure file permissions allow reading of images.
- If using a subdirectory, update relative paths if necessary.
- For HTTPS sites, geolocation will work without issues.

9.3 Common Issues

- Images not loading: Check file paths and case sensitivity.
- PDF download fails: Ensure jsPDF script loaded correctly (check console for errors).
- Bootstrap carousel not working: jQuery must be loaded before Bootstrap's JavaScript.
- Mobile menu not closing after click: The code adds a click handler to .navbar-nav .nav-link to collapse the menu; ensure no other scripts interfere.

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10. Conclusion

This WOW project is a self-contained, feature-rich demonstration of modern front-end techniques. It can serve as a template for educational or promotional websites about landmarks, or as a learning resource for developers exploring interactive web design. The code is intentionally kept simple and well-commented to facilitate understanding and modification.