PipilikaX Backend

PipilikaX is a full-stack PHP web application for a space and astronomy-themed blog/content management system. This project features a complete admin panel with user management, blog posts, team members, categories, and more.

Features

Public Website

- **Home Page**: Animated starfield hero, solar system lineup, NASA Image of the Day API, ISS tracker
- **Blog Listing**: Filter posts by category or author, responsive grid layout with pagination
- **Blog Single**: Pretty URLs (`/blog/post-slug`), related posts, social sharing, author box
- **About Page**: Mission statement, dynamic team member profiles
- **Contact Page**: Contact form with database storage, embedded map
- **404 Page**: Animated space background with floating astronaut

Admin Panel

- **Dashboard**: Role-based statistics (posts, views, messages)
- **Posts Management**: Create, edit, delete posts with TinyMCE editor, featured images, categories
- **Categories**: Full CRUD for post categories with slug auto-generation
- **Team Members**: Manage team with photo uploads, roles, social links
- **Messages**: View and manage contact form submissions
- **Users**: User management with role-based permissions (Admin, Editor, Author, Subscriber)
- **Site Settings**: Configure site name, tagline, logo, social links, footer text

Security Features

- Password hashing with bcrypt
- Session-based authentication with role permissions
- CSRF protection on all forms
- Image upload validation (extension + MIME type verification)
- SQL injection prevention with PDO prepared statements
- XSS protection with output escaping
- Production error handling (errors logged, not displayed)
- Secure session management (HTTPOnly, SameSite=Strict cookies)
- Session regeneration every 30 minutes
- Auto-logout after 1 hour of inactivity

- URL-friendly slug validation for posts and categories

Technologies Used

- **Backend**: PHP 8.x, PDO/MySQL
- **Frontend**: HTML5, CSS3 (Flexbox, Grid, Animations), JavaScript ES6
- **Database**: MySQL with views for common queries
- **Rich Text Editor**: TinyMCE 6
- **Icons**: Font Awesome 6
- **APIs**: NASA APOD, ISS Tracker iframe

Project Structure

```
PipilikaX-Backend/
   admin/                   # Admin panel
       assets/              # Admin-specific CSS/JS
       includes/            # Sidebar, header, footer
       posts/               # Post management
       categories/          # Category management
       team/                # Team member management
       messages/            # Contact messages
       users/               # User management
       settings/            # Site settings
   assets/                  # Public CSS, JS, images
   config/                  # Database & constants
   database/                # SQL schema files
   includes/                # Shared PHP (functions, templates)
   uploads/                 # User-uploaded files
   [public pages].php       # Home, blog, about, contact, 404
```

Getting Started

Prerequisites

- PHP 8.0+
- MySQL 5.7+ or MariaDB
- Apache with mod_rewrite (XAMPP, MAMP, or similar)

Installation

1. **Clone the repository:**

   ```
   git clone https://github.com/azharanowar/PipilikaX-Backend.git
   ```

2. **Move to your web server directory:**

   ```
   mv PipilikaX-Backend /path/to/htdocs/
   ```

3. **Create the database:**

   - Create a MySQL database named `pipilikax_db`
   - Import the schema: `database/pipilikax_complete.sql`

4. **Configure database connection:**

   - Edit `config/constants.php` with your database credentials:

   ```php
   define('DB_HOST', 'localhost');
   define('DB_NAME', 'pipilikax_db');
   define('DB_USER', 'root');
   define('DB_PASS', '');
   ```

5. **Create uploads and logs directories:**

   ```
   mkdir -p uploads/blog uploads/team uploads/settings logs
   chmod 755 uploads logs
   ```

6. **Access the site:**

   - Public: `http://localhost/PipilikaX-Backend/`
   - Admin: `http://localhost/PipilikaX-Backend/admin/`

Default Admin Login

- **Email**: `admin@pipilikax.com`
- **Password**: `password123`

User Roles

Role	Permissions
Admin	Full access to all features
Editor	Manage all posts, categories, messages
Author	Create and manage own posts
Subscriber	View dashboard only

Screenshots

Public Website

Home Page

Home Page

Figure 1: Home Page

Blog Listing

Figure 2: Blog Listing

Blog Listing

Blog Post

About Page

Contact Page

Admin Panel

Login Page

Dashboard

Posts Management

Team Management

Site Settings

User Management

Configuration

Debug Mode

In `config/constants.php`:

```php
define('DEBUG_MODE', false);  // Set to true for development
```

Blog Post

Figure 3: Blog Post

About Page

Figure 4: About Page

Contact Page

Figure 5: Contact Page

Admin Login

Figure 6: Admin Login

Admin Dashboard

Figure 7: Admin Dashboard

Admin Posts

Figure 8: Admin Posts

Admin Team

Figure 9: Admin Team

Admin Settings

Figure 10: Admin Settings

Admin Users

Figure 11: Admin Users

Site URL

Update `SITE_URL` in `config/constants.php` for your domain.

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License

Open-source for educational and learning purposes.

Author

Developed with   by Azhar Anowar
Feedback and contributions are welcome!

"Explore the cosmos—one scroll at a time."