Insight Stream: Navigate the News Landscape
Project Documentation

Introduction

Project Title:News Wave

Team Members:

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Project Overview

Purpose:

The News App is designed to provide users with real-time news updates from various categories, including politics, sports, technology, and entertainment. The app fetches news from an external API and presents it in an intuitive and user-friendly interface.

Features:

- Fetch and display live news articles
- Categorized news sections
- Search functionality for news articles
- Bookmark/save favorite articles
- Responsive and mobile-friendly UI
- Dark mode toggle

Architecture

Component Structure:

- **App.js** – Main component managing routes and layout
- **Header.js** – Contains navigation and search functionality
- **NewsList.js** – Displays a list of news articles
- **NewsCard.js** – Reusable component for individual news articles
- **CategoryFilter.js** – Allows users to filter news by category
- **Bookmark.js** – Displays saved articles
- **DarkModeToggle.js** – Handles dark mode functionality

State Management:

- **Context API** used for managing global state, such as dark mode and bookmarks.

Routing:

- Implemented using **React Router** for page navigation:
    - `/` - Home (Top news)
    - `/category/:id` - News by category
    - `/search` - Search results

- `/bookmarks` - Saved articles

Setup Instructions

Prerequisites:

Ensure the following are installed:

- Node.js (latest LTS version)
- Git
- Code editor (VS Code recommended)

Installation:

1. Clone the repository:

```sh
CopyEdit
git clone https://github.com/yourusername/news-app.git
cd news-app
```

2. Install dependencies:

```sh
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npm install
```

3. Set up environment variables (e.g., API key for news API).
4. Start the development server:

```sh
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npm start
```

Folder Structure

```pgsql
CopyEdit
news-app/
│── src/
│   │── components/
│   │   │── Header.js
│   │   │── NewsList.js
│   │   │── NewsCard.js
│   │   │── CategoryFilter.js
│   │── pages/
│   │   │── Home.js
│   │   │── Category.js
│   │   │── Search.js
│   │   │── Bookmarks.js
│   │── context/
│   │   │── DarkModeContext.js
│   │   │── BookmarkContext.js
│   │── assets/
│   │── styles/
│   │── App.js
```

```
│    ├── index.js
├── public/
├── package.json
├── README.md
```

Utilities:

- **Helper functions** for API requests
- **Custom hooks** for managing dark mode and fetching news

Running the Application

To start the application locally, use:

```sh
CopyEdit
npm start
```

Component Documentation

Key Components:

- **NewsCard** – Displays an individual news article
    - Props: `title`, `description`, `imageUrl`, `publishedAt`, `source`
- **CategoryFilter** – Dropdown or tab-based selection for filtering categories

Reusable Components:

- **Button.js** – Styled button component
- **Loader.js** – Loading spinner

State Management

Global State:

- **Dark Mode State:** Managed using **Context API**
- **Bookmark State:** Stores saved news articles

Local State:

- **Search Input:** Managed within the search component

User Interface

Screenshots showcasing different pages and features (home page, category selection, dark mode, etc.)

Styling

CSS Frameworks/Libraries:

- Styled Components for dynamic styling
- Bootstrap for responsive layout

Theming:

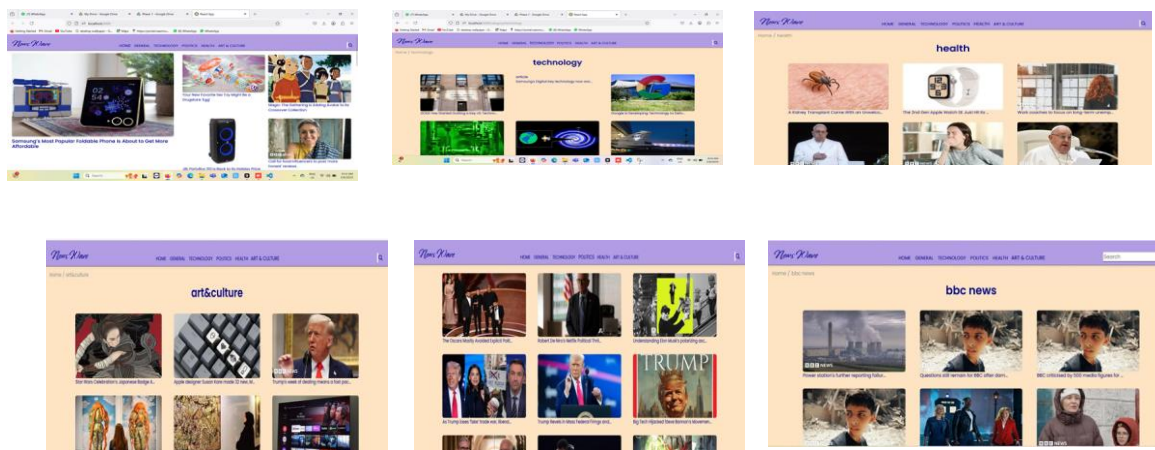- Supports light and dark mode using CSS variables

Testing

Testing Strategy:

- **Unit Tests:** Using Jest and React Testing Library
- **Integration Tests:** Testing API requests

Code Coverage:

- Ensuring test coverage for major components

Screenshots or Demo

Known Issues

- API rate limits may restrict news fetching
- Some categories may not return results due to API limitations

Future Enhancements

- **User authentication** for personalized news feed
- **Offline support** with cached news
- **Push notifications** for breaking news

THANK YOU