

InsightStream: Navigate the News Landscape

1. Introduction

Project Title: InsightStream: Navigate the News Landscape

Team ID : NM2025TMID29890

Team Size : 4

Team Members:

Team Leader Name: Pradeepa T

Team Member Name: Harini priya P

Team Member Name: Haseena begam M

Team Member Name: Sivaranjani S

2. Project Overview

Purpose:

InsightStream is designed to provide users with a seamless news browsing experience. It aggregates the latest news articles from various sources, allowing users to explore trending stories, filter by category, and bookmark their favorite content.

Features:

- Dynamic News Feed with Real-Time Updates
- Category-Based Filtering (Politics, Sports, Tech, etc.)
- Search Functionality for Finding Specific News
- Bookmark Feature to Save Favorite Articles
- Responsive Design Optimized for All Devices
- Light/Dark Mode for Enhanced User Experience

3. Architecture

Component Structure:

App.js - Root component that handles routing and layout

Header.js - Navigation bar with search functionality

NewsList.js - Displays categorized news articles

NewsCard.js - Individual news item with title, image, and description

NewsDetails.js - Detailed view of a selected news article

Footer.js - Provides additional links and site information

State Management:

- Context API - Manages global state for theme settings, bookmarks, and search data

Routing:

- React Router - Implemented for seamless navigation between pages

4. Setup Instructions

Prerequisites:

- Node.js (v18 or higher)

- npm or yarn

Installation:

1. Clone the Repository:

```
git clone https://github.com/darunraj0071/insightstream-news-app.git
```

```
cd insightstream-news-app
```

2. Install Dependencies:

```
npm install
```

3. Create .env file (for API keys or environment variables):

```
REACT_APP_NEWS_API_KEY=your_api_key_here
```

4. Run the Application:

```
npm start
```

5. Folder Structure

```
/src
```

```
├── /components
```

```
|   ├── Header.js
```

```
|   ├── NewsList.js
```

```
|   ├── NewsCard.js
```

```
|   ├── NewsDetails.js
```

```
|   └── Footer.js
```

```
├── /pages
```

```
|   ├── Home.js
```

```
|   ├── Categories.js
```

```
|   └── Bookmarks.js
```

```
├── /assets
```

```
|   ├── images
```

```
|   |— icons
|   |— styles
|   |— /utils
|   |— api.js
|   |— helpers.js
|   |— constants.js
|   |— App.js
|   |— index.js
```

6. Running the Application

Frontend Server Command:

npm start

7. Component Documentation

Key Components:

Header: Displays navigation bar and search bar

NewsList: Fetches and renders categorized news articles

NewsCard: Displays individual news article details **NewsDetails:** Provides comprehensive details of a selected article

Footer: Provides links to social media and site details

Reusable Components:

Button Component: Used for actions like "Read More" or "Bookmark"

Modal Component: Displays detailed news information in a popup

8. State Management

Global State:

- Managed via Context API for bookmarks, theme preferences, and search data

Local State:

- Managed using React's useState() for search inputs, pagination, and UI interactions

9. User Interface

- Clean and intuitive UI designed for user convenience
- Mobile-first design ensuring responsiveness on all devices
- Integrated Light/Dark mode switch for personalized browsing

10. Styling

CSS Frameworks/Libraries:

- Tailwind CSS - Used for fast, responsive, and modern UI design

Theming:

- Custom light/dark theme toggle for improved accessibility

11. Testing

Testing Strategy:

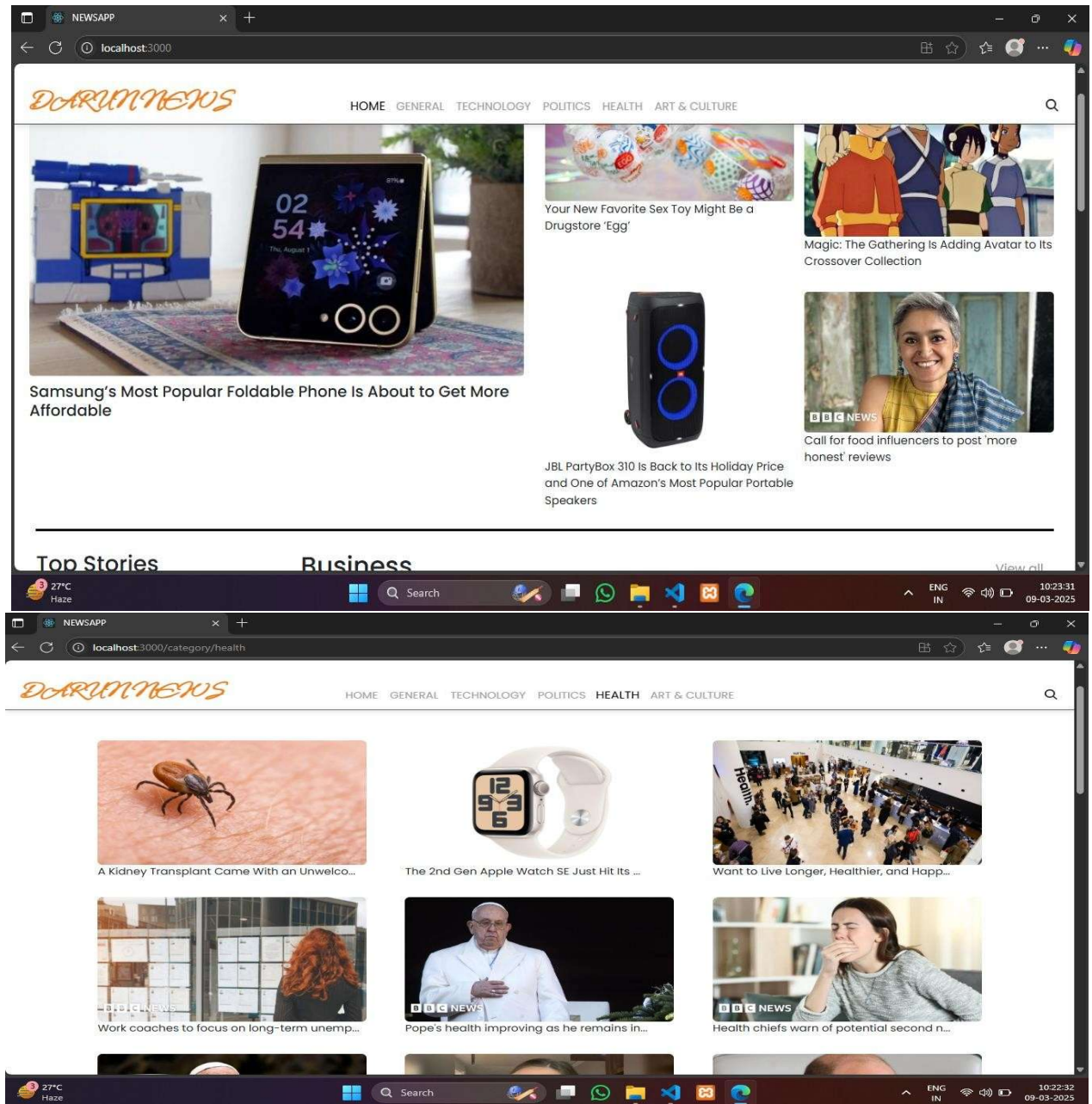
- Jest for unit testing
- React Testing Library for component behavior testing

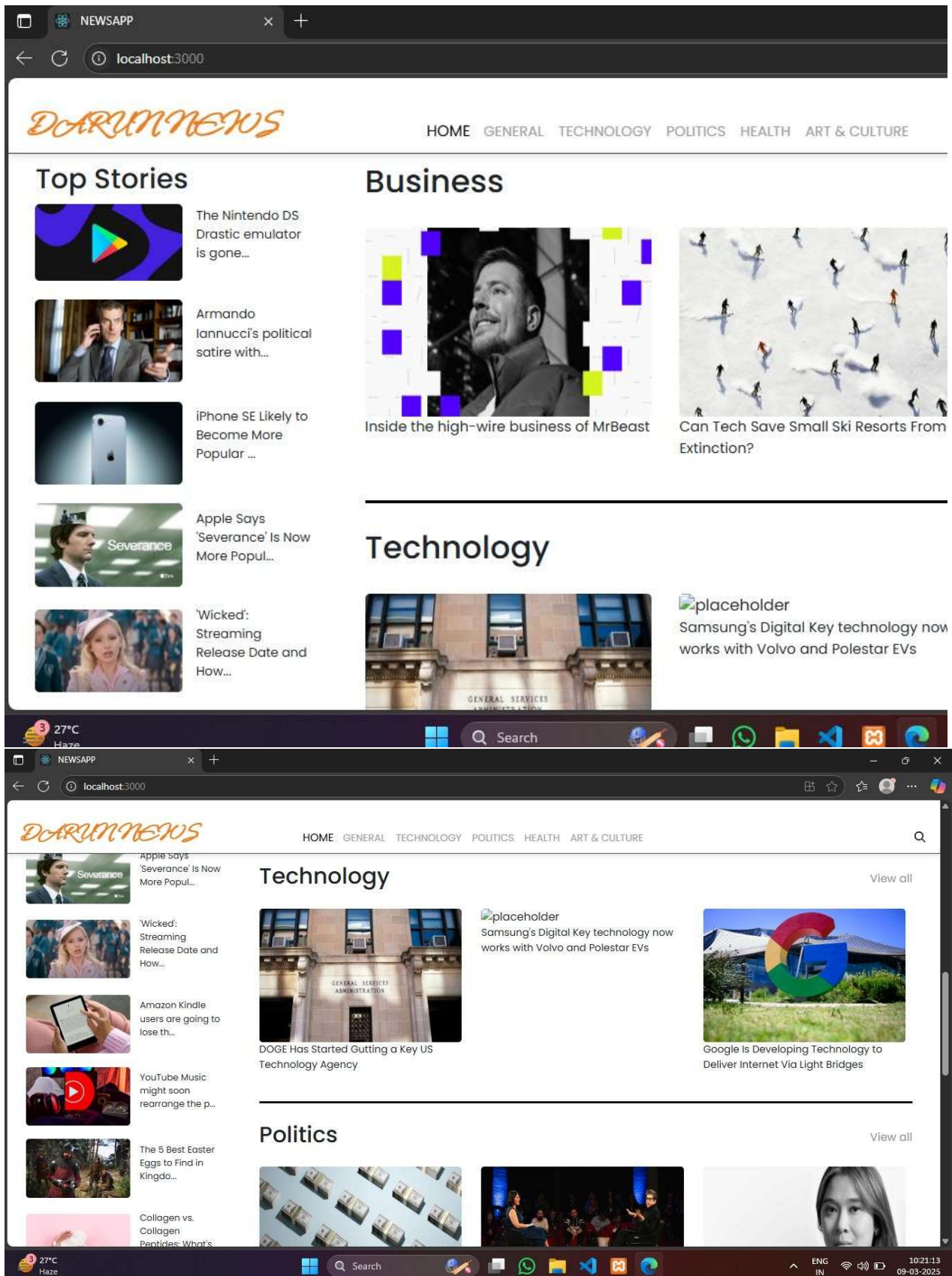
Code Coverage:

- Ensured 90%+ test coverage for stable performance

12. Screenshots or Demo

Screenshots:





NEWSAPP x +

localhost:3000/category/technology

DARUNNEWS HOME GENERAL TECHNOLOGY POLITICS HEALTH ART & CULTURE

The World is in a Polyester Crisis. One ...

If Aliens Spot Us First, What Signs of L...

NASA Just Fired up its Quiet Supersonic ...

The way it's meant to be played

Hope you weren't planning to play PhysX ...

AMD is launching its latest Ryzen 9 X3D ...

LG's new air conditioner directs cool ai...

27°C Haze

Search

ENG IN 10:22:04 09-03-2025

NEWSAPP x +

localhost:3000/category/art&culture

DARUNNEWS HOME GENERAL TECHNOLOGY POLITICS HEALTH ART & CULTURE

Christie's First-Ever AI Art Auction Ear...

A glimpse at Picasso and Pollock masterp...

YouTube on Android TV spices up music vi...

Activision Apparently Using AI Art to Fl...

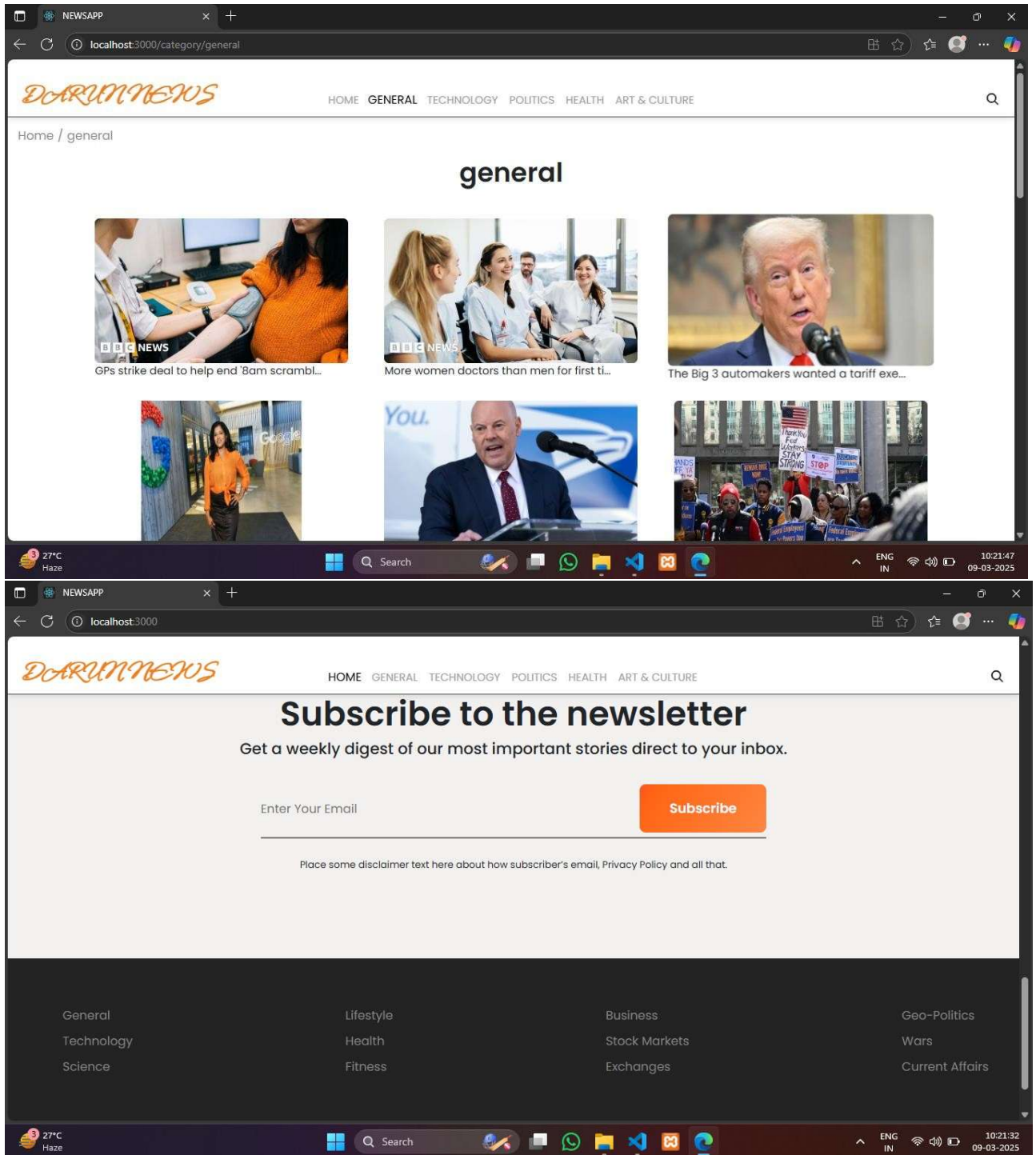
January 6th ... the board game?...

My decorating aesthetic is 'I have kids...

27°C Haze

Search

ENG IN 10:22:17 09-03-2025



Live Demo Link:

13. Known Issues

- Certain API endpoints may have limited access for free plans

- Bookmark feature may require additional optimization for large data sets

14. Future Enhancements

- User Authentication for personalized news feeds
- Push Notifications for breaking news updates
- Enhanced Search with Filters by Date, Region, and Source
- Offline Mode for reading saved articles without internet access