

## TASK 8

**SUBJECT:**

Programming For AI

**PROGRAM:**

BS DATA SCIENCE

**SUBMITTED TO:**

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**ROLL NUMBER:**

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BSDS (4A)

## TASK 8

### Flask News App

**backend + frontend code (python/flask + html,css,js code)**

#### Backend code

```
from flask import Flask, render_template, jsonify
import requests

app = Flask(__name__)
API_KEY = "900b473053ca4dd6ab4fa228afa0a050"
def get_news():
    url = f"https://newsapi.org/v2/top-headlines?country=us&apiKey={API_KEY}"
    response = requests.get(url)
    data = response.json()
    return data.get("articles", [])

@app.route('/news', methods=['GET'])
def news():
    articles = get_news()
    return jsonify(articles)

@app.route('/')
def home():
    articles = get_news()
    return render_template('index.html', articles=articles)

if __name__ == '__main__':
    app.run(debug=True)
```

#### Overview

This Flask-based News App fetches the latest top headlines from the NewsAPI and displays them in a web interface. It provides both an API endpoint and a front-end web page to view the news articles.

## Technologies Used:

- Flask (Python Web Framework)
- HTML & CSS (Bootstrap for Styling)
- NewsAPI (for fetching live news)

## Code Implementation

### app.py (Main Flask Application)

- **Flask**: A lightweight web framework used to create the web application.
- **render\_template**: Used to render HTML templates (e.g., index.html).
- **jsonify**: Converts Python data structures (lists/dictionaries) into JSON format for API responses.
- **requests**: A module for making HTTP requests to external APIs (in this case, NewsAPI).

### 2. Initializing Flask Application

- **app = Flask(\_\_name\_\_)**: Creates a new Flask web application instance.
- **API\_KEY**: The unique API key required to fetch data from the NewsAPI.

"900b473053ca4dd6ab4fa228afa0a050"

### 3. Fetching News Data from NewsAPI

- Constructs the API request URL using the API key.
- Sends a GET request to fetch top news headlines from the US.
- Parses the JSON response.
- Extracts the "articles" field (which contains the news articles) and returns it as a list.

### 4. API Endpoint for News Data

- Defines a Flask route /news that handles GET requests.
- Calls **get\_news()** to fetch the latest news articles.
- Returns the articles as a JSON response, making this a REST API endpoint.

### 5. Rendering the Home Page

- Defines a route / for the home page.
- Calls **get\_news()** to fetch the latest news articles.

- Passes the articles to **index.html**, which displays them.

## 6. Running the Application

- Ensures the Flask app runs only when executed directly (not when imported as a module).
- debug=True: Enables debug mode, which helps in troubleshooting errors during development.

### index.html (HTML Structure)

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>News App</title>
7      <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css">
8      <link rel="stylesheet" href="{{ url_for('static', filename='style.css') }}>
9      <script src="https://kit.fontawesome.com/a076d05399.js" crossorigin="anonymous"></script>
10 </head>
11 <body>
12
13     <nav class="navbar navbar-expand-lg navbar-dark bg-black shadow">
14         <div class="container">
15             <a class="navbar-brand fw-bold text-white" href="/">📰 News App</a>
16         </div>
17     </nav>
18
19     <div class="container mt-5">
20         <h1 class="text-center stylish-heading">📰 Latest News</h1>
21
```

```
<div class="content-section mt-4">
    <h3 class="sub-heading">◆ Categories</h3>
    <ul class="bullet-list">
        <li>◆ Technology</li>
        <li>◆ Business</li>
        <li>◆ Sports</li>
        <li>◆ Entertainment</li>
        <li>◆ Health</li>
    </ul>
</div>

<div class="content-section mt-4">
    <h3 class="sub-heading">◆ Why Stay Updated?</h3>
    <ul class="bullet-list">
        <li>◆ Stay informed about global events.</li>
        <li>◆ Keep up with market trends.</li>
        <li>◆ Get insights into technological advancements.</li>
        <li>◆ Know the latest in sports and entertainment.</li>
    </ul>
</div>
```

```
<div class="container mt-5">
    <div class="row mt-4">
        {% for article in articles %}
            <div class="col-lg-4 col-md-6">
                <div class="card mb-4 news-card">
                    
                        <h5 class="card-title fw-bold">{{ article.title }}</h5>
                        <p class="card-text text-muted">{{ article.description or 'No description available' }}</p>
                        <a href="{{ article.url }}" class="btn btn-dark btn-sm" target="_blank">Read More</a>
                    </div>
                </div>
            {% endfor %}
        </div>
    </div>

    <footer class="footer bg-black text-white text-center py-3 mt-5">
        <p>© 2025 News App | Developed by Fizza Farooq</p>
    </footer>

</body>
</html>
```

This file is responsible for rendering the front-end of the News App. It fetches data from Flask and displays it in a structured layout.

- **<head> Section:**
  - Links Bootstrap for styling.
  - Links a custom CSS file (style.css).
  - Includes Font Awesome for icons.
- **Navigation Bar (<nav>):**
  - Displays the app name "News App" in white text over a black background.
  - Uses Bootstrap's navbar class for responsiveness.
- **Main Content (<div class="container">):**
  - **"Latest News" Header:** Styled professionally.
  - **Categories Section:** A list of categories (Technology, Business, etc.).
  - **News Articles:**
    - Dynamically generated using {% for article in articles %} loop.
    - Each article is displayed inside a Bootstrap card with:
      - An image (<img> tag).
      - A title (<h5>).
      - A short description.
      - A "Read More" button linking to the full news article.
- **Footer (<footer>):**
  - A simple black background footer with copyright text.

## style.css (Styling & Design)

```
body {  
    background-color: #ffffff;  
    font-family: 'Arial', sans-serif;  
}  
  
.stylish-heading {  
    font-size: 2.5rem;  
    font-weight: bold;  
    color: black;  
    font-family: 'Georgia', serif;  
    text-transform: uppercase;  
    letter-spacing: 2px;  
}  
  
.sub-heading {  
    font-size: 1.8rem;  
    font-weight: bold;  
    color: #333;  
    margin-bottom: 10px;  
}  
  
.bullet-list {  
    list-style-type: none;  
    padding: 0;  
}
```

```
.bullet-list li {  
    font-size: 1.2rem;  
    color: #555;  
    margin: 5px 0;  
}  
  
.navbar {  
    padding: 15px;  
}  
  
.news-card {  
    border-radius: 12px;  
    overflow: hidden;  
    transition: transform 0.3s ease-in-out, box-shadow 0.3s ease-in-out;  
    background: #f8f9fa;  
    border: 1px solid #ddd;  
}  
  
.news-card:hover {  
    transform: translateY(-5px);  
    box-shadow: 0 5px 15px rgba(0, 0, 0, 0.2);  
}  
  
.news-card img {  
    height: 180px;  
    object-fit: cover;  
}
```

```
.news-card img {  
    height: 180px;  
    object-fit: cover;  
}  
  
.footer {  
    position: relative;  
    bottom: 0;  
    width: 100%;  
    font-size: 14px;  
}
```

This file enhances the UI using a **black & white** theme with professional styling.

- **General Styling:**
  - Sets background color to white.
  - Uses 'Arial' and 'Georgia' fonts.
- **Heading Styles (.stylish-heading):**
  - Large bold font with letter-spacing for a professional look.
- **Categories Section (.bullet-list):**
  - Removes default bullet styles and applies custom bullets ( ◇ ).
- **Navbar (.navbar):**
  - Black background with white text.
- **News Cards (.news-card):**
  - Rounded corners for a clean look.
  - hover effect to slightly raise the card and add a shadow.
- **Footer (.footer):**
  - Fixed at the bottom.
  - Black background with white text.

# OUTPUT

```
PS C:\Users\MA Computer\Desktop\Task#7&gt; & "C:/Users/MA Computer/AppData/Local/Programs/Python/Python313/python.exe" "c:/Users/MA Computer/Desktop/Task#7.py"
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 126-018-599
```

## News App

### LATEST NEWS

#### ◆ Categories

- ◆ Technology
- ◆ Business
- ◆ Sports
- ◆ Entertainment
- ◆ Health

#### ◆ Why Stay Updated?

- ◆ Stay informed about global events.
- ◆ Keep up with market trends.
- ◆ Get insights into technological advancements.
- ◆ Know the latest in sports and entertainment.



#### Authorities confiscate passport of man who last saw missing student Sudiksha Konanki - CNN

Authorities in the Dominican Republic have confiscated the passport of the man who is the last person known to have been with missing University of Pittsburgh student Sudiksha Konanki, according to a source close to the investigation.

[Read More](#)



#### Trump says autopen use makes Biden's pardons for Jan. 6 panel "VOID" - Axios

The panel members should "fully understand that they are subject to investigation at the highest level," Trump wrote.

[Read More](#)

## 1. Homepage (/)

- When you open the app in your browser (<http://127.0.0.1:5000/>), the homepage loads.
- It displays the latest news articles in a visually appealing way.
- The page is styled in **black & white** for a professional look.

### Sections on the Homepage

#### 1. Navigation Bar

- A black navigation bar at the top with white text displaying "News App".
- This remains fixed at the top for easy access.

#### 2. Headline - "Latest News"

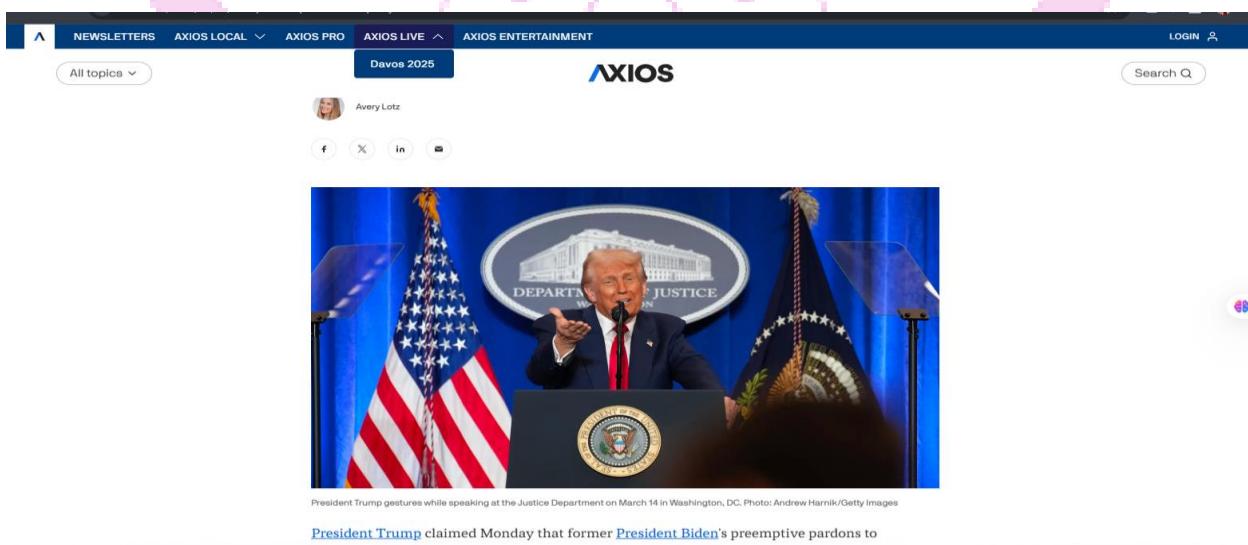
- A large, bold heading (stylish-heading) appears to introduce the news section.
- Uses uppercase letters and a stylish font.

#### 3. News Categories (Bullet List)

- A sub-section with different news categories, such as:
  - Business
  - Technology
  - Sports
  - Health
- These are styled using **custom bullet points**.

#### 4. News Articles (Dynamically Fetched)

- Each news article appears in a **Bootstrap-styled card** format.
- Articles are fetched dynamically from the API and displayed in the following format:
  - **Image** (If available, otherwise a default placeholder image)
  - **Headline**
  - **Brief Description**
  - **"Read More" Button** (Links to the full news article)





President Trump gestures while speaking at the Justice Department on March 14 in Washington, DC. Photo: Andrew Harnik/Getty Images

[President Trump](#) claimed Monday that former [President Biden](#)'s preemptive pardons to members of the House Jan. 6 [select committee](#) and others are "VOID" and "VACANT" because they were "done by Autopen."

**Why it matters:** Experts cast doubt on Trump's rationale, and said it was unlikely that a court would allow a president to revoke or nullify his predecessor's pardons.

- It's the latest example of Trump [testing the limits](#) of executive power, and could set the stage for a legal showdown with some of his staunchest political enemies.

**Driving the news:** Trump contended in a late-night [Truth Social post](#) that Biden's pardons are "hereby declared VOID, VACANT, AND OF NO FURTHER FORCE OR EFFECT" and that the "necessary Pardoning Documents were not explained to, or approved by, Biden."

- The committee members should "fully understand that they are subject to investigation at the highest level," Trump wrote.
- He claimed without evidence that the members of the committee, which include former Rep. [Liz Cheney](#) (R-Wyo.), were "probably responsible for the Documents that were signed on their behalf" without Biden's knowledge.

**Zoom in:** As long as a pardon is valid, it is final, says Jeffrey Crouch, an American University

## 5. Footer Section

- A **black footer** with white text at the bottom.
- Displays **Copyright © 2025 News App Developed by Fizza Farooq.**

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