FOPII PROJECT REPORT

Introduction: In today's fast-paced world, staying updated with the latest news is essential. However, manually browsing through various news sources can be time-consuming. To address this issue, we have developed an RSS parser coupled with a trigger system. This system automatically retrieves news from Google and Yahoo RSS feeds, filters them based on user-defined triggers, and presents relevant news stories to the user. This report provides an overview of the system's design, functionality, and implementation details.

Overview of the System: The RSS parser and trigger system consist of several components:

1. **RSS Feed Retrieval:** The system fetches news items from Google and Yahoo RSS feeds using the **feedparser** library.
2. **Data Structure:** News stories are represented using the **NewsStory** class, which encapsulates information such as title, description, link, and publication date.
3. **Triggers:** Triggers are conditions that determine whether a news story should be included in the filtered results. Triggers can be based on phrases occurring in the title or description of the news story, as well as time-based conditions such as before or after a specific date.
4. **Filtering:** News stories are filtered based on user-defined triggers, and only relevant stories are presented to the user.
5. **User Interface:** The system provides a simple user interface using **mtTkinter**, allowing users to view filtered news stories in a scrollable text area.

Functionality:

1. **RSS Feed Retrieval:** The system periodically polls Google and Yahoo RSS feeds to retrieve the latest news items.
2. **Data Structure:** News stories are represented using the **NewsStory** class, which provides methods to access different attributes of a news story.
3. **Triggers:** Triggers are implemented as subclasses of the **Trigger** class. Phrase triggers (**PhraseTrigger**) check for the presence of specific phrases in the title

or description of a news story, while time triggers (**BeforeTrigger** and **AfterTrigger**) check for news stories published before or after a specified date.
4. **Filtering:** The **filter_stories** function applies user-defined triggers to filter news stories and returns only those stories that satisfy the trigger conditions.
5. **User Interface:** The system provides a simple user interface that displays filtered news stories in a scrollable text area. Users can easily view the latest news without manually browsing multiple websites.

Implementation Details:

1. **RSS Feed Retrieval:** The **process** function retrieves news items from Google and Yahoo RSS feeds and parses them into **NewsStory** objects.
2. **Triggers:** Triggers are implemented as subclasses of the **Trigger** class. Each trigger class provides an **evaluate** method that determines whether a news story satisfies the trigger condition.
3. **Filtering:** The **filter_stories** function applies a list of triggers to a list of news stories and returns only those stories that satisfy at least one trigger condition.
4. **User Interface:** The user interface is implemented using **mtTkinter**, a multi-threaded version of the **Tkinter** library. A separate thread continuously polls RSS feeds, filters news stories, and updates the user interface with filtered results.

Future Enhancements:

1. **Additional Triggers:** Expand the range of triggers to include more sophisticated conditions for filtering news stories.
2. **User Preferences:** Allow users to customize trigger settings and prioritize certain types of news stories.
3. **Performance Optimization:** Improve the efficiency of RSS feed retrieval and filtering algorithms to reduce latency and enhance user experience.

4. **Integration with Other Platforms:** Integrate the system with social media platforms or custom news sources to provide users with a comprehensive news browsing experience.

Conclusion:

Overall, the RSS parser with a trigger system offers a valuable solution for users seeking an efficient way to access and filter news content. With continued development and enhancements, the system has the potential to become a go-to tool for staying informed in today's rapidly evolving world.

The RSS parser with a trigger system provides an efficient way for users to stay updated with the latest news. By automating the process of news retrieval and filtering, the system saves users time and effort, allowing them to focus on relevant news stories. The system's modular design enables easy extensibility, allowing for the addition of new triggers or integration with other news sources in the future