Task 1

The classes have been classified into four parts:

1. *Subscription and Content Subsystem*

   Subscription and Content Subsystem manages the collection, organization, and synchronization of articles and feeds. It includes **Feed Handling**, which oversees subscription tracking and updates; **Article Management**, responsible for processing, sanitizing, and event-based updates; **Data Import/Export**, enabling seamless subscription transfers; **Feed Parsing Engine**, which extracts and interprets OPML, RSS, and XML formats; and **Metadata Enrichment**, refining links and article details for better content structuring.

2. *Feed Organization Subsystem*

   Feed Organization Subsystem focuses on structuring content, managing user interactions, and optimizing search capabilities. It includes **Personalized Article Management**, which tracks user-specific article data and preferences; **Universal Search & Indexing**, enabling efficient content discovery through indexing, filtering, and query handling; and **Saved & Read Content**, which manages bookmarked and read articles for better organization. Additionally, **Subscription Access** has been integrated into the **Content & Subscription Module** to streamline feed-related processes.

3. *User Management Subsystem*

   User Management Subsystem manages user identities, authentication, and system security. It includes **User Management**, which handles user data, events, and utilities; **Authentication & Access Control**, which governs authentication tokens and role-based functions (though some are unused); **Security & Permissions**, ensuring secure access through filters, request validation, and user identity management; and **Localization & Preferences**, which provides resources for locale settings, themes, and categories. Additionally, **Theme & Category Management** is integrated into the **Content & Subscription Module** for better organization.

4. Common

    These include all the classes that are used for various Utility tools needed throughout the system.

Note: Common are the utility classes that are needed for multiple subsystems. They exist in all three UML diagrams. In some diagrams, they exist as disconnected components.

The Class documentation and UML Diagrams can be found in the same folder as this report.

Simplifying Assumptions:

- Common Classes exist in all the subsystems' UML Diagrams. In Some diagrams, some of these classes may exist without any interaction to the main system. They have been included due to the fact these utility tools might have some purpose later in the future.