# Assignment 3: KWIC Search (First Submission)

Code Repository URL:		https://github.com/TIC3001/tic3001-ay2122s2-13/tree/assignment3			
Team number:		13			
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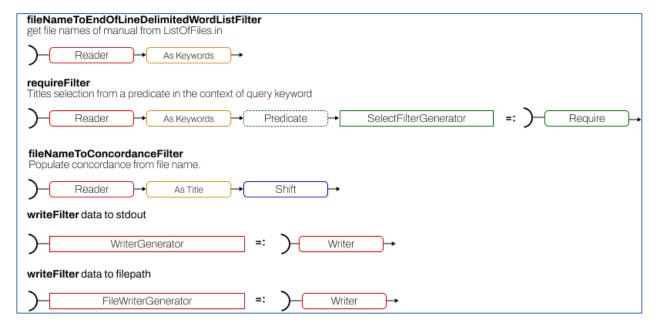
#### 1. Introduction

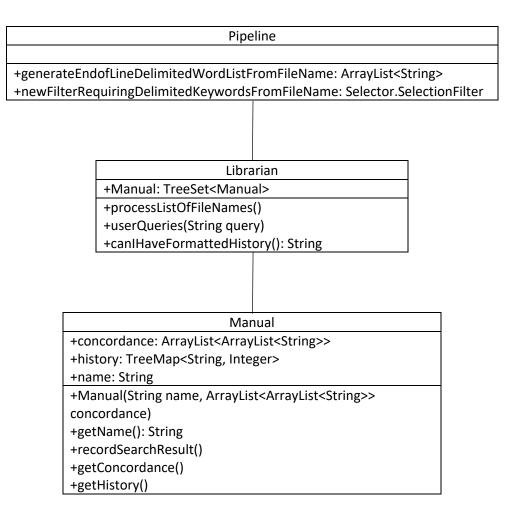
This assignment extends on the implementation of the Pipe & Filter design to include MVC and facade design patterns via the implementation of classes like the Module and Librarian, that handle the storage of data and perform certain key functions such as search and format.

Noel & Roshan – Worked on the code implementation of the additional features together using Code with Me – JetBrains during the live session and figured out on the low-level and high-level design implementation concurrently. Candidate set of suitable principles and architectural patterns to adhere closely to.

# 2. Architectural Design

Pipe & Filter Design - Component Diagram





## 3. Applying Design Principles and Software Patterns

Patterns: MVC and Facade

Model View Controller (MVC):

- 1. User specifies user input, in this case as a search parameter
- 2. The Controller (Librarian) uses the search function and records positive search results as records into the Model (Manual).
- 3. The Manual then can return the records and the Librarian formats the records and returns the results to the app.

### Façade

1. The Library calls the transformNativeRawData, which calls the Pipleline.generateConcordance class which helps to process the pipe and filter implementation and returns the concordance.

2.	The IO or app requests from the Librarian the output result based on the user input, and the librarian runs back end data manipulation, storage and retrieval functions before pulling the requests in a specified format back to the IO.				