

Anonymous Architects

Phase 2 Presentation

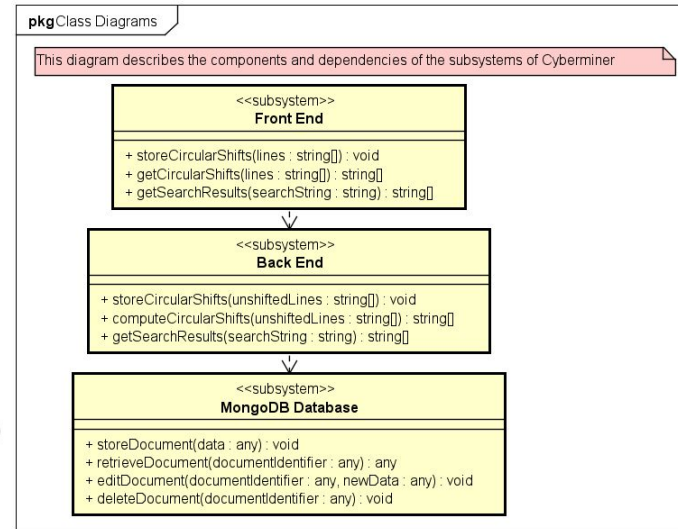
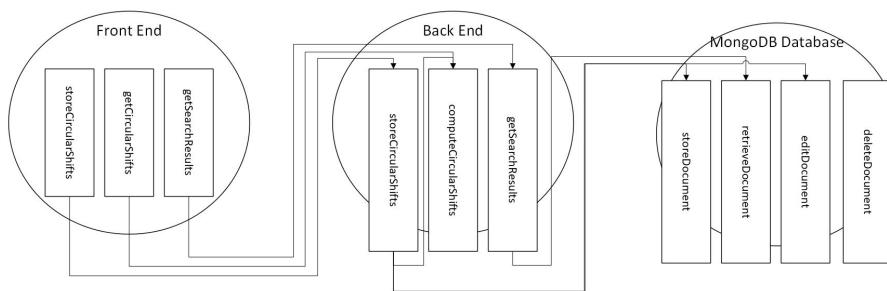
Trevor Celenza, Yousef Magableh, Cole Oftedahl
Fall 2025 SE 6362.001

Presentation Overview

- Architecture
 - Abstract Architecture
 - Class Diagrams
 - Composite Structure Diagrams
 - Sequence Diagrams
 - Patterns
 - Garbage Words
- Updated Features
- Demo

Architecture - Overall Cyberminer System Architecture

- Based on Model-View-Controller
- Shared UI system for KWIC tester & search engine
- High level of abstraction (These aren't real methods)
- UML adds data types, reduces method invocations

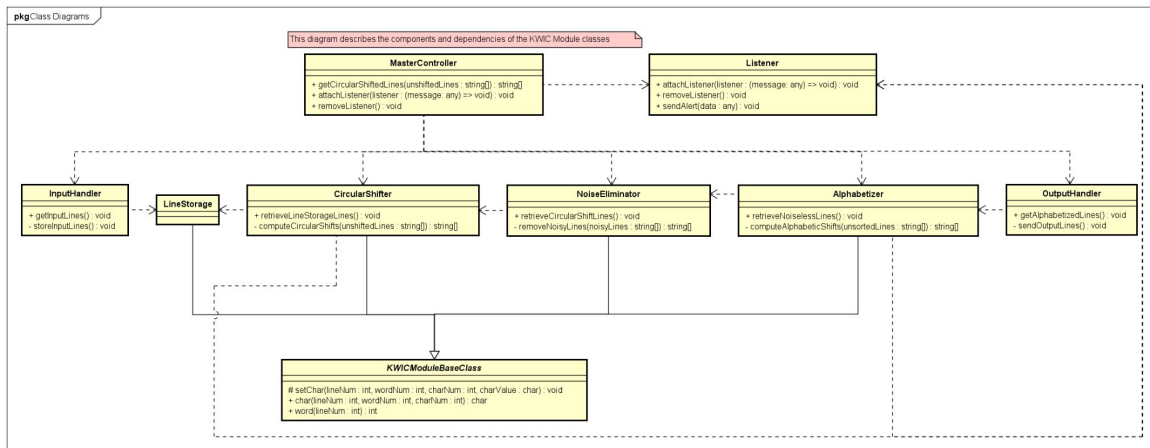


Architecture - KWIC Module Architecture

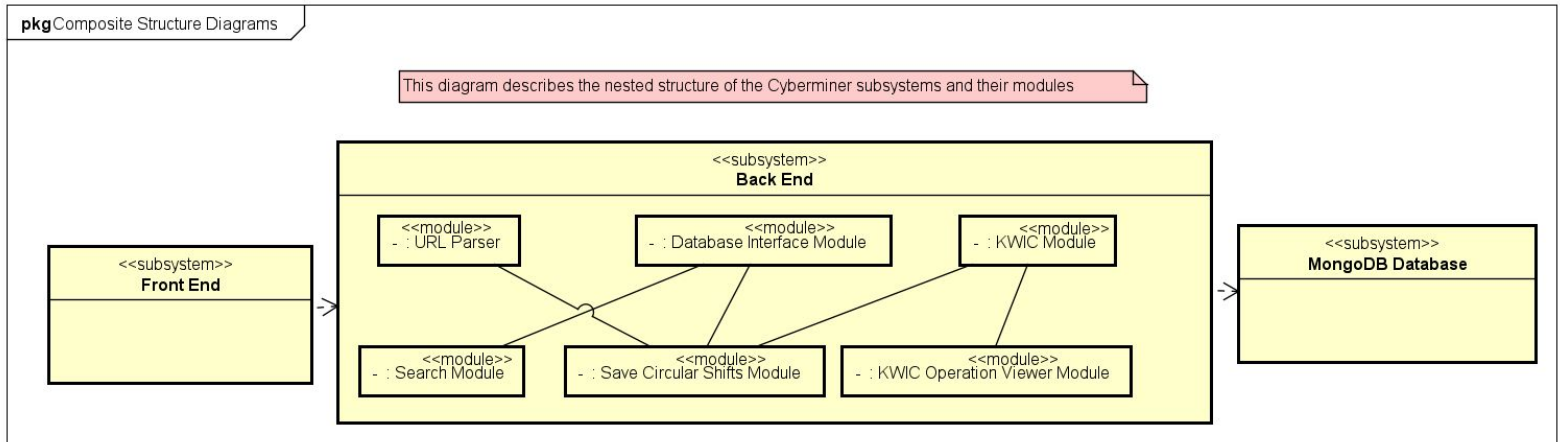
Object-oriented design. Each processing step is a separate data type.

Initial input, final output, and master controller are also separate data types.

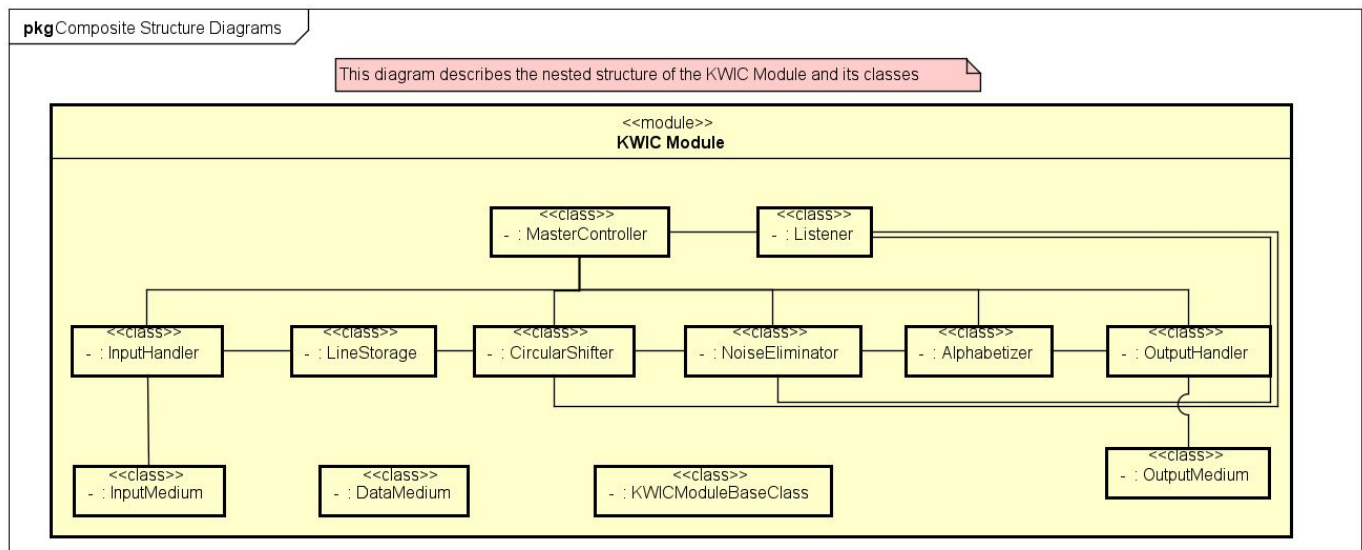
External modules can attach an event listener or obtain shifted lines directly.



Architecture - Cyberminer Composite Structure



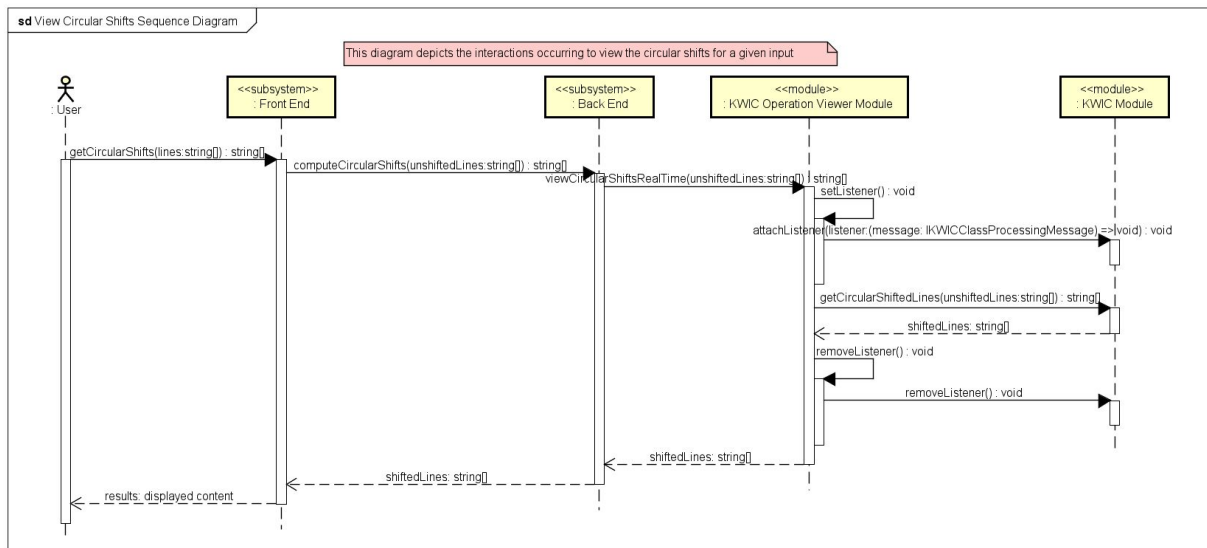
Architecture - KWIC Module Composite Structure



Architecture - Sequence Diagrams

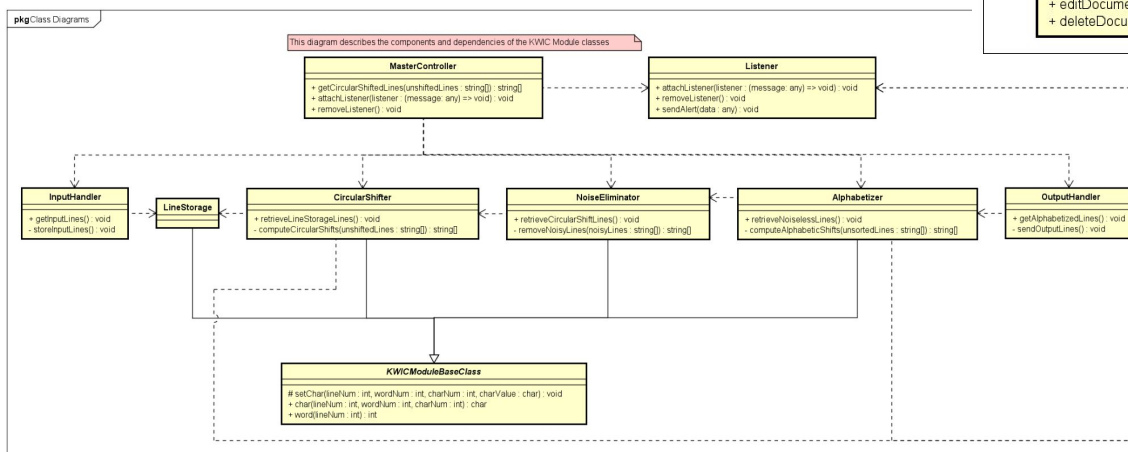
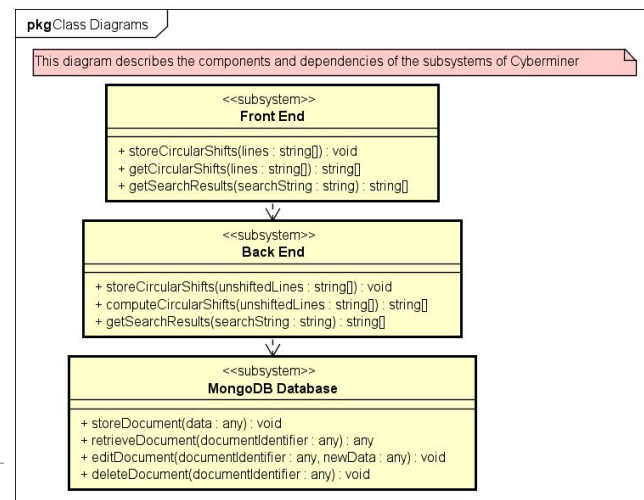
Helps to clarify interactions in high-level architecture.

High level of abstraction. Detailed design is hidden.



Architecture - Patterns

- Listener
- Facade
- MVC



Garbage Words

- A
- And
- As
- At
- But
- By
- For
- In
- Is
- Nor
- Not
- Of
- On
- Or
- So
- Than
- The
- To
- Which
- With
- Yet

Phase 2 Updated Features

- Add/Delete Entry
- Settings
- Concurrent Search
- URL Validation
- Search Logic
- Button UI Feedback

URL Validation EBNF

```
() ::= grouping
{} ::= repetition of preceding element (number of repetitions inside braces)
?  ::= preceding element is optional
*  ::= preceding element can occur 0 or more times
+  ::= preceding element can occur 1 or more times
```

```
URL ::= ('http' ('s')? '://' )? identifiers '.' ('edu' | 'com' | 'org' | 'net' | 'gov' | 'eu' | 'uk' |
'in' | 'de') path
identifiers ::= (identifier ('.' identifier){0,3}) | (numericIdentifier ('.' numericIdentifier){3})
identifier ::= (letter (letter | digit)*)
numericIdentifier ::= (digit+)
path ::= '/'? | ('/' char)+
letter ::= ('a' | 'b' | ... | 'y' | 'z' | 'A' | 'B' | ... | 'Y' | 'Z')
digit ::= ('1' | '2' | ... | '9' | '0')
char ::= letter | digit | '=' | '?' | '&' | '%' | '#' | '*' | '+' | '-' | '_' | '.'
```

Live Demo

References

- [1] L. Chung. "Advanced Software Architecture and Design." UTD Webpages. Accessed: Sep. 26, 2025. [Online.] Available: <https://personal.utdallas.edu/~chung/SA/syllabus.htm>
- [2] "List of Conjunctions in English with Examples." 7esl.com. Accessed: Sep. 27, 2025. [Online.] Available: <https://7esl.com/conjunctions-list/>
- [3] "Prepositions." Cambridge Dictionary. Accessed: Sep. 27, 2025. [Online.] Available: <https://dictionary.cambridge.org/grammar/british-grammar/prepositions>