



ripgrep crates/searcher/src/lib.rs: Code Companion

Reference code for the Searcher Overview lecture. Sections correspond to the lecture document.

Section 1: The Crate Documentation as Architecture Document

```
/*!
This crate provides an implementation of line oriented search, with optional
support for multi-line search.

# Brief overview

The principle type in this crate is a [`Searcher`], which can be configured
and built by a [`SearcherBuilder`]. A `Searcher` is responsible for reading
bytes from a source (e.g., a file), executing a search of those bytes using
a `Matcher` (e.g., a regex) and then reporting the results of that search to
a [`Sink`] (e.g., stdout). The `Searcher` itself is principally responsible
for managing the consumption of bytes from a source and applying a `Matcher`
over those bytes in an efficient way. The `Searcher` is also responsible for
inverting a search, counting lines, reporting contextual lines, detecting
binary data and even deciding whether or not to use memory maps.
*/
```

The `///` doc comment syntax marks this as module-level documentation. The `[Searcher]` syntax creates links to types in generated documentation.

Section 2: Public API Design Through Re-exports

