



ripgrep crates/regex/src/config.rs: Code Companion

Reference code for the Regex Configuration lecture. Sections correspond to the lecture document.

Section 1: The Configuration Structure

```
/// Config represents the configuration of a regex matcher in this crate.
/// The configuration is itself a rough combination of the knobs found in
/// the `regex` crate itself, along with additional `grep-matcher` specific
/// options.
#[derive(Clone, Debug)]
pub(crate) struct Config {
    // Standard regex options
    pub(crate) case_insensitive: bool,
    pub(crate) case_smart: bool,          // ripgrep's intelligent case
    detection
    pub(crate) multi_line: bool,
    pub(crate) dot_matches_new_line: bool,
    pub(crate) swap_greed: bool,
    pub(crate) ignore_whitespace: bool,
    pub(crate) unicode: bool,
    pub(crate) octal: bool,

    // Resource limits
    pub(crate) size_limit: usize,
    pub(crate) dfa_size_limit: usize,
    pub(crate) nest_limit: u32,

    // ripgrep-specific options
    pub(crate) line_terminator: Option<LineTerminator>,
    pub(crate) ban: Option<u8>,          // byte to ban from matches
    pub(crate) crlf: bool,                // Windows line ending support
    pub(crate) word: bool,                // -w flag: word boundary matching
    pub(crate) fixed_strings: bool,       // -F flag: literal matching
    pub(crate) whole_line: bool,         // -x flag: full line matching
}
```

All fields use `pub(crate)` visibility—configuration is set through the builder API, not by direct manipulation. The `Clone` and `Debug` derives are essential for configuration types that need to be duplicated and debugged.

