Google Summer of Code Final Evaluation

Link to codebase: https://github.com/rjkroege/edwood
My fork: https://github.com/camsn0w/edwood

My objective this summer was to modernize the undo system in edwood by refactoring the existing code to allow us to use an edit buffer data structure.

The refactoring process ended up being more involved than me (or my mentors) expected, however the process of getting the new undo buffer data structure working is underway. Remaining work is to get the Undo function to inform the overarching structure of the changed runes, this is easier said than done though as the undo structure uses bytes whereas the rest of the program uses runes.

PRs:

https://github.com/rjkroege/edwood/pull/325

- When getting familiar with the codebase I made a simple fix in order to remove a

  warning

https://github.com/rjkroege/edwood/pull/328

- This was the start of the refactoring, just a simple name change to avoid

  confusion as I began building up the new buffer.

https://github.com/rjkroege/edwood/pull/329

https://github.com/rjkroege/edwood/pull/330

https://github.com/rjkroege/edwood/pull/332

- I wanted to include these as this was when I was first getting familiar with using a

  rebase workflow. While it was a bit of a learning curve and resulted in me

  deleting a branch and starting over again a few times, what followed was a much

  better understanding of git and rebase.

- While I still had more to learn, this would come to be a valuable learning process that will surely save me from some headache in industry

https://github.com/rjkroege/edwood/pull/335

- Once I finally had the Observable Editable Buffer ready, I learned another lesson in preparing a PR, break things up and make changes as small as possible.
- This was an important milestone in the project as the Observable Editable Buffer would become the new file, and soon I'd be working to slowly move functionality out of file.go into here.

https://github.com/rjkroege/edwood/pull/342

- Here I took a member from the file.go struct and moved it into its own struct for use through OEB, the first major thing to be taken out.
- I also learned a bit more about the semantics of naming in Go, something I hadn't quite picked up from coding myself.

https://github.com/rjkroege/edwood/pull/343

- Here I separate the Elog (edit log), used to implement the features from Rob Pike's sam language.
- This was interesting as it let me get familiar with the concept of moving things to separate, internal packages.
- This was also the first time I broke master as removing the "\n" to appease staticcheck ended up causing tests to fail that were expecting those newlines

https://github.com/rjkroege/edwood/pull/344

- Here it was discovered that a feature had been previously broken with the tests for it still passing, what followed was a couple days of me trying to figure out how

my code broke it before discovering the feature never worked in the first place.

I'm sure this won't be the last time I deal with something like this.

https://github.com/rjkroege/edwood/pull/345

https://github.com/rjkroege/edwood/pull/346

- More renaming of files to fit with the Go naming conventions.

https://github.com/rjkroege/edwood/pull/347

- A followup on #342, getting additional related members out of File.go and into OEB

https://github.com/rjkroege/edwood/pull/348

- Not merged, but taught me that changes like these are better off waiting until the other branches get merged or to make it dependent on those branches to make it easier. I ended up realizing it would be quicker just to close this and make another PR than to rebase this.

https://github.com/rjkroege/edwood/pull/349

- This probably should've been renamed as it ended up involving a few things, but the main purpose was to rename Elog to Sam and proceed to go and move a few utility functions to a seperate file for when everything file related is moved outside of the main program into the internal folder.

https://github.com/rjkroege/edwood/pull/350

- Fixed the error described in #343

https://github.com/rjkroege/edwood/pull/351

- For this part I modified https://pkg.go.dev/golang.org/x/exp/utf8string to use bytes instead, renaming it utf8bytes.

- This was a suggestion from Rob and it was a great experience to make a new data structure from an existing one, a lesson on how to stand on the shoulders of giants.

https://github.com/rjkroege/edwood/pull/352

- #348 updated and merged

https://github.com/rjkroege/edwood/pull/353

- Possibly the most exciting PR yet, the one where I was finally able to move the files of interest out of the main program
- It was more involved than we had previously thought but I was happy to finally have it working and it showed I wasn't far from getting undo in and working.

https://github.com/rjkroege/edwood/pull/354

- Moved utf8bytes into the new File (the files moved in the previous PR)

https://github.com/rjkroege/edwood/pull/355

https://github.com/rjkroege/edwood/pull/356

- Moving more concepts from file.go into the external file.

In progress:

- https://github.com/camsn0w/edwood/tree/BytesUsesUndo
  - This is the culmination of smaller branches that haven't fully matured yet. I've got everything but the undo/redo part of the new undo buffer working with the existing codebase.
  - Working on this branch led me to realize a significant impediment to getting the new file working; There will need to be a global commit concept

in order to inform the program of which files would need to be redrawn

following a change. I hope to have this figured out soon.