Project Proposal: Gemini Browser

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The Gemini protocol is a relatively new, minimalist, privacy-respecting protocol for serving simple hypertext, called Gemtext, over the internet. An overview of the goals of the Gemini project is available in [3]. I propose to write a simple graphical browser for the Gemini protocol.

The browser will be written in Java. The user interface will be written in JavaFX. The backend will be made up of two parts: One part to make Gemini requests, and another to parse the Gemtext into JavaFX elements for display.

Gemini connections are made over TCP port 1965. The structure of requests is quite simple – after the TCP connection has been open, client requests are simply an absolute URL followed by a carriage return and a line feed. The server will send back a status and, if the request was successful, the requested content. The Gemini protocol specification is available in [2].

Gemtext is very similar to Markdown, but simpler. Each line is parsed based on its first character, and Gemtext tags must all be on their own line. In the following example:

```
# Heading

Welcome to my Gemini capsule!

=> gemini://other.site/page.gmi Another page!
```

The first line, which starts with a `#`, is a top-level heading. The third line, which just contains text, is treated as a paragraph. Paragraphs are separated by blank lines. The last line, which begins with `=>`, is a URL. Further information about Gemtext is available in [1].

References

[1] Project Gemini. *A quick introduction to "gemtext" markup*. URL: https://geminiprotocol.net/docs/gemtext.gmi.

[2] Project Gemini. *Gemini network protocol specification*. URL: https://geminiprotocol.net/docs/protocol-specification.gmi.

[3] Project Gemini. *Project Gemini FAQ*. URL: https://geminiprotocol.net/docs/faq.gmi.