

IBDP Computer Science Internal Assessment

Criterion C: Development

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1. Structure and justification

2. Algorithmic thinking

3. Development techniques

4. Existing tools

The following tools, libraries, and other materials were used in the development of this product.

- The [Go programming language's specification](#) was referred to, especially for documentation on how channel operations work; its GC toolchain (the most widely-used reference implementation) is used as the compiler during development and production; its standard library is used extensively in the program.
- [Go by Example](#) was referred to for documentation on command-line flags and contexts.
- [MDN Web Docs](#) was used as my primary source of JavaScript documentation.
- [A hosted fork of gddo](#) was used as my primary source of Go documentation, along with using the `go doc` command as part of the GC toolchain.
- `scfg` written by [Simon Ser](#) is used to parse configuration files.
- `keyfunc` written by [Micah Parks](#) is used to update the JSON Web Key Set to validate JSON Web Tokens for user authentication.
- `websocket` maintained by [coder](#) is used for bi-directional communication.

- A minimal variant of the [RFC1459 IRC message format](#) is used as the message format in client-server communication.
- [golang-jwt](#) is used to parse and validate JSON Web Tokens for user authentication.
- [uuid](#) by Google is used to generate [UUIDs](#) during testing.
- [pgx](#) by [Jack Christensen](#) is used to establish a connection with the PostgreSQL database backend.
- [PostgreSQL](#) is used as a database backend.
- [golangci-lint](#) is used as a linter to detect programming errors.
- [neovim](#) is used as a text editor; its LSP client was used to connect to [gopls](#) for error detection and documentation provision while editing code.