

Build Your Own Lisp

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Write an abstract

Contents

| | |
|-----------------------|---|
| <i>Prompt</i> | 1 |
| <i>Common Headers</i> | 2 |
| <i>Chunks</i> | 2 |
| <i>Index</i> | 2 |

Prompt

- 1a `<Print version and exit information. 1a>≡`
 `puts("Lispy v0.0.1");`
 `puts("Press ctrl-c to exit\n");`
This code is used in chunk 2a.
- 1b `<prompt.c 1b>≡`
 `<Include the boolean type and values. 2b>`
 `<Include the standard I/O functions. 2c>`
 `<Include the standard library definitions. 2d>`
This definition is continued in chunks 1 and 2a.
Root chunk (not used in this document).
- 1c `<prompt.c 1b>+≡`
 `#include <editline/readline.h>`
Defines:
 `add_history`, used in chunk 1d.
 `readline`, used in chunk 2a.
- 1d `<prompt.c 1b>+≡`
 `bool eval(char *input)`
 `{`
 `if (input && *input) {`
 `add_history(input);`
 `printf("< %s\n", input);`
 `}`

 `// N.B. This is a no-op when !input.`
 `free(input);`

 `return (bool)input;`
 `}`
Uses `add_history` 1c, `free` 2d, and `printf` 2c.

2a *<prompt.c 1b>* \equiv

```
int main(int argc, char *argv[])
{
    <Print version and exit information. 1a>

    bool keep_going = true;
    while (keep_going) {
        keep_going = eval(readline("> "));
    }

    return 0;
}
```

Uses `readline` 1c and `true` 2b.

Common Headers

2b *<Include the boolean type and values. 2b>* \equiv

```
#include <stdbool.h>
```

Defines:

`true`, used in chunk 2a.

This code is used in chunk 1b.

2c *<Include the standard I/O functions. 2c>* \equiv

```
#include <stdio.h>
```

Defines:

`printf`, used in chunk 1d.

This code is used in chunk 1b.

2d *<Include the standard library definitions. 2d>* \equiv

```
#include <stdlib.h>
```

Defines:

`free`, used in chunk 1d.

This code is used in chunk 1b.

Chunks

<Include the boolean type and values. 2b> 1b, 2b

<Include the standard I/O functions. 2c> 1b, 2c

<Include the standard library definitions. 2d> 1b, 2d

<Print version and exit information. 1a> 1a, 2a

<prompt.c 1b> 1b, 1c, 1d, 2a

Index

`add_history`: 1c, 1d


`free`: 1d, 2d

`printf`: 1d, 2c

`readline`: 1c, 2a

`true`: 2a, 2b

Todo list

| | |
|---|---|
|  Write an abstract | 1 |
| To-Do | |