

Crossplatform usage of compiled C library with golang and web client

The project domain is solving linear systems of equations. Currently implemented only matrix method.

- Lab is adaptation of lab1 with web client
- Golang currently used as http server, covered by unit tests
- Webserver servers static files and provides linear system solving api
- Web client is implemented with vanilla js
- The lab reused compiled C library from lab1
- Supported platforms:
 - darwin-arm64
 - linux-arm64
 - linux-amd64

Testing

Run tests of webserver and library The script should detect your platform and run version for it.

```
# In root directory
./test.sh
```

To run tests on another supported platform run:

```
./test.sh <platform>
```

Running

Run webserver The script should detect your platform and run version for it.

```
# In root directory
./run.sh
```

To run webserver on another supported platform run:

```
./run.sh <platform>
```

Architecture

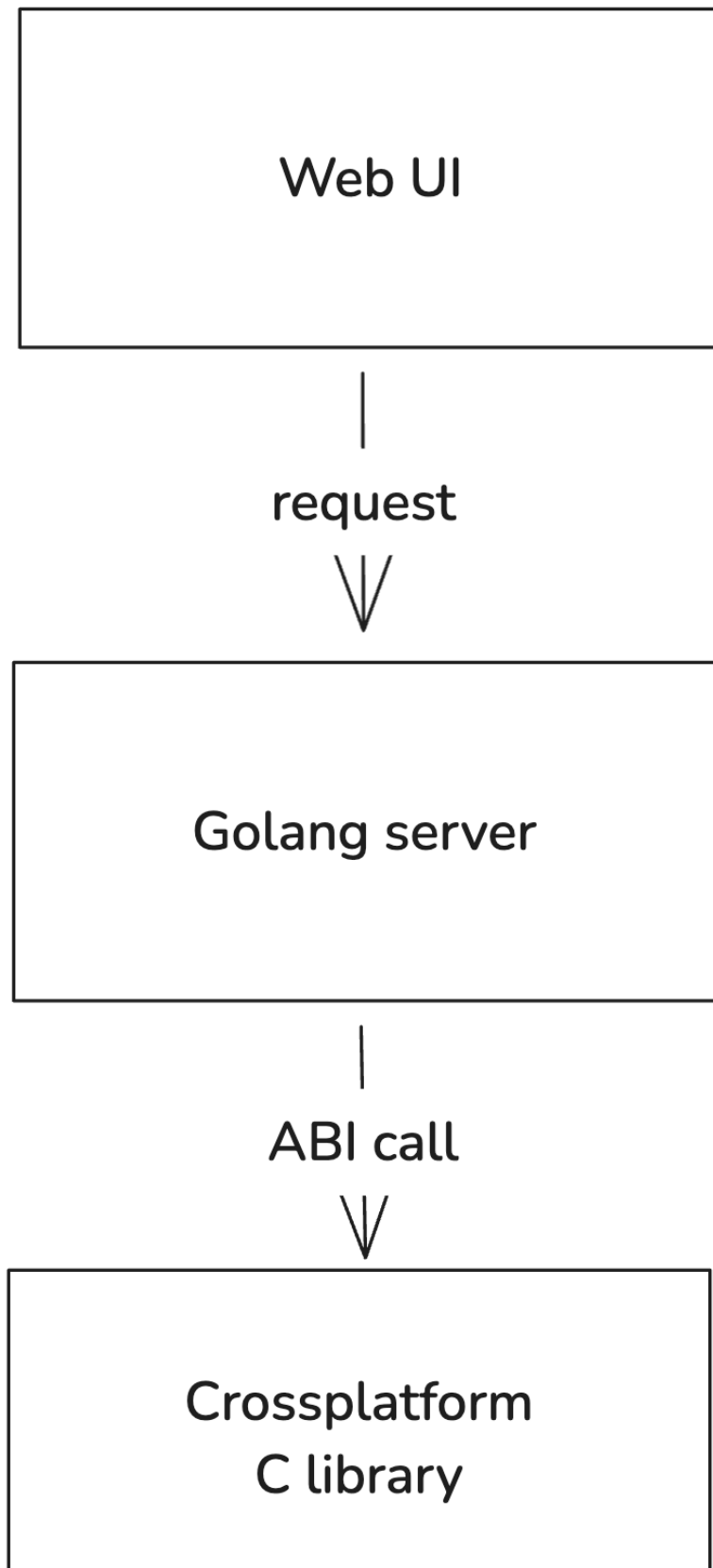
Web UI

request

Golang server

ABI call

Crossplatform
C library





WebUI

Linear System Solver

Input Matrix

<input type="button" value="Add Row"/>		<input type="button" value="Remove Row"/>		<input type="button" value="Add Column"/>		<input type="button" value="Remove Column"/>	
Equation	x_1	x_2	x_3	= b			
1	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="6"/>			
2	<input type="text" value="0"/>	<input type="text" value="-3"/>	<input type="text" value="1"/>	<input type="text" value="7"/>			
3	<input type="text" value="2"/>	<input type="text" value="1"/>	<input type="text" value="3"/>	<input type="text" value="15"/>			

Output Matrix

x_1	x_2	x_3
<input type="text" value="2"/>	<input type="text" value="-1"/>	<input type="text" value="4"/>