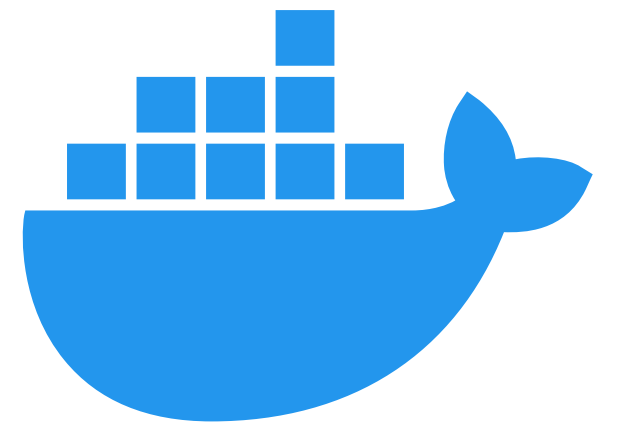
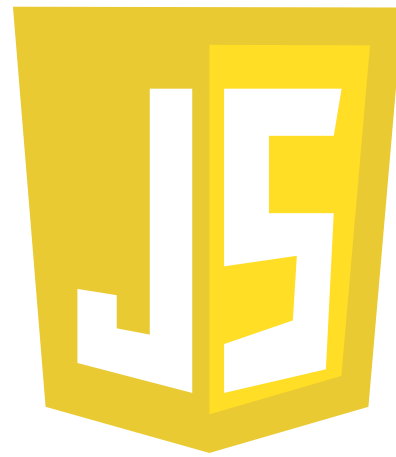
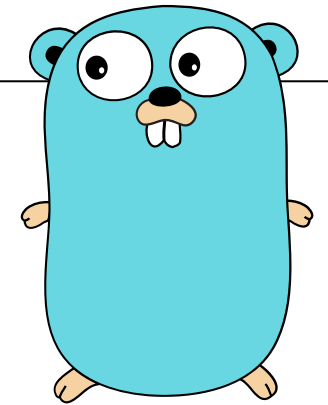


# Shell on The Web

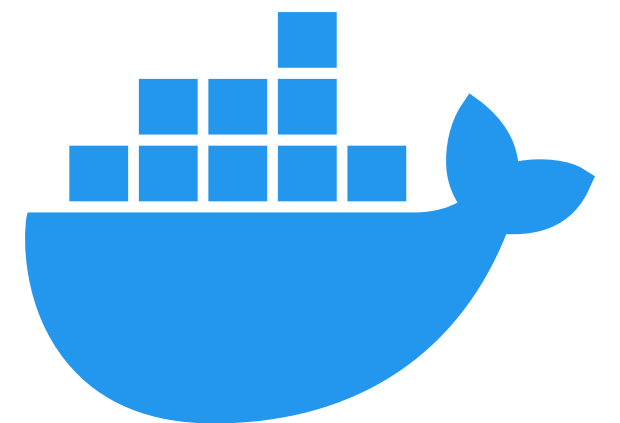
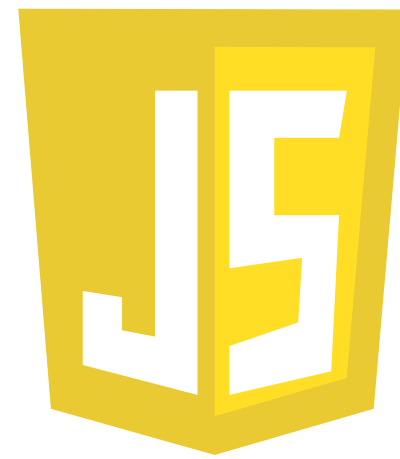




# Plan



Write a program that can emulate a shell. Make it accessible through the web

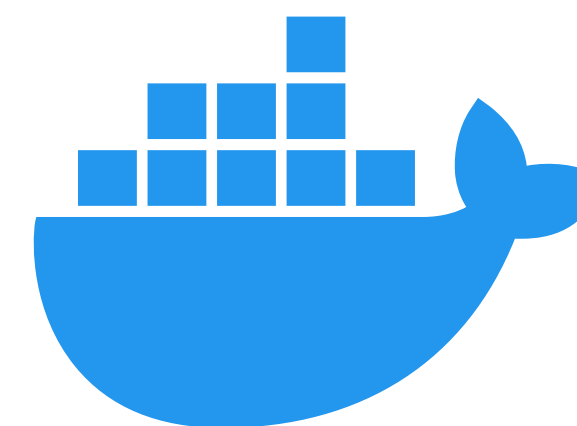




# What worked

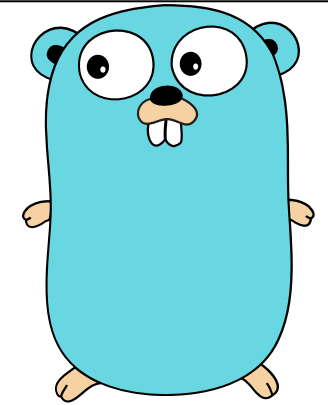


Writing the shell on the command line was easy. I used go's os package to make system calls, it worked well.

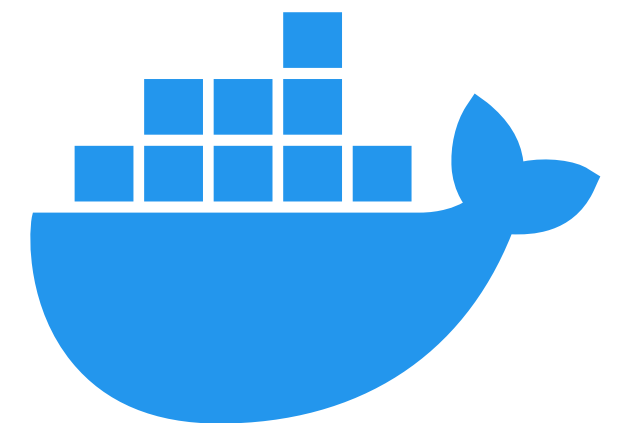




# Problem

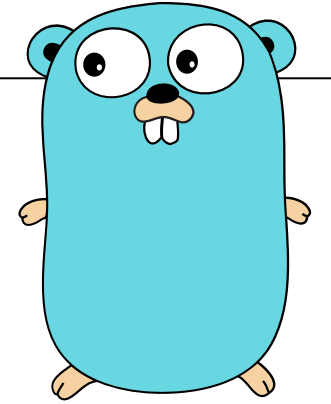


My original idea was to compile the go program to web assembly, then let javascript handle the input and output. But turns out, you can't run shell commands in the browser

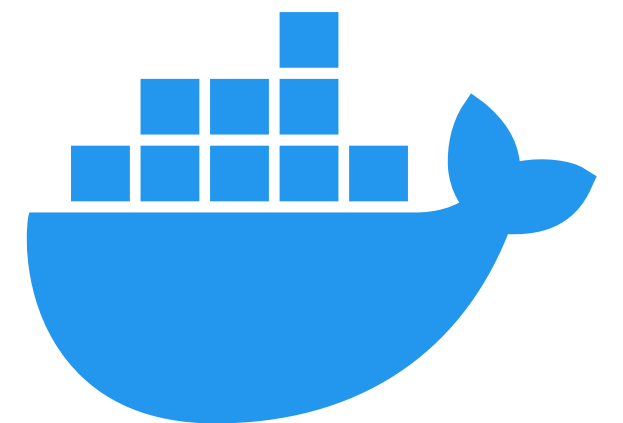
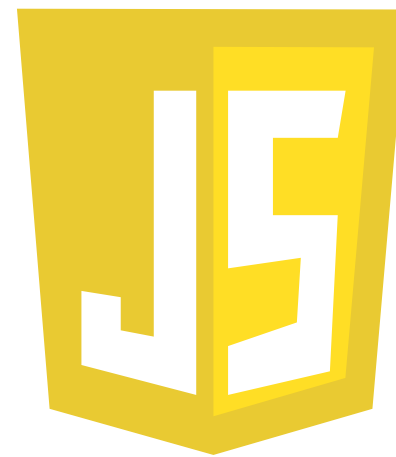




# Solution

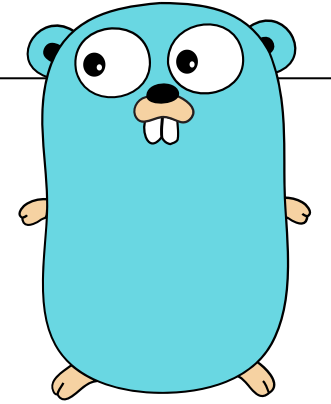


I used web sockets. I send text entered on the web terminal to the backend, do the system call, and send back the output.

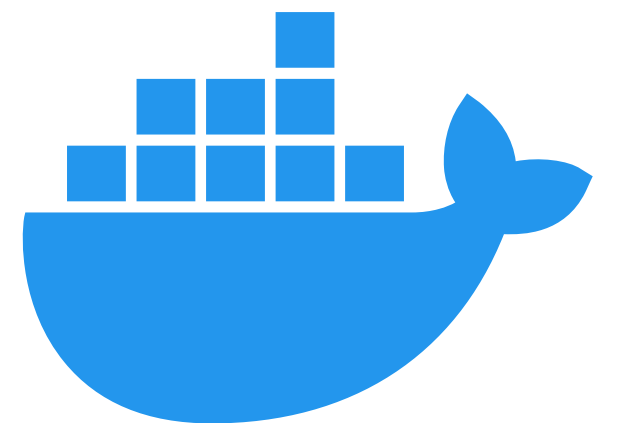
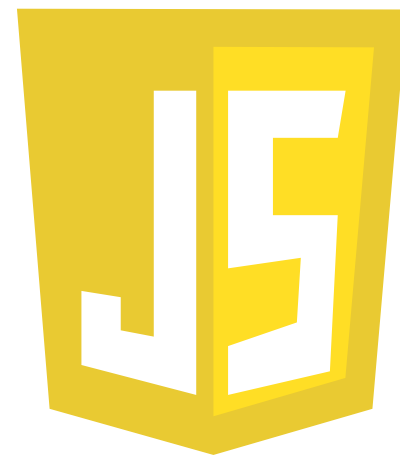




# Problem

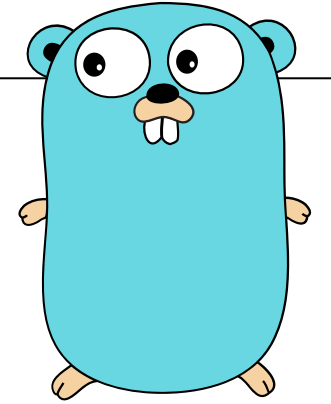


Anyone can run whatever they want,  
and mess up your backend (rm -rf /)

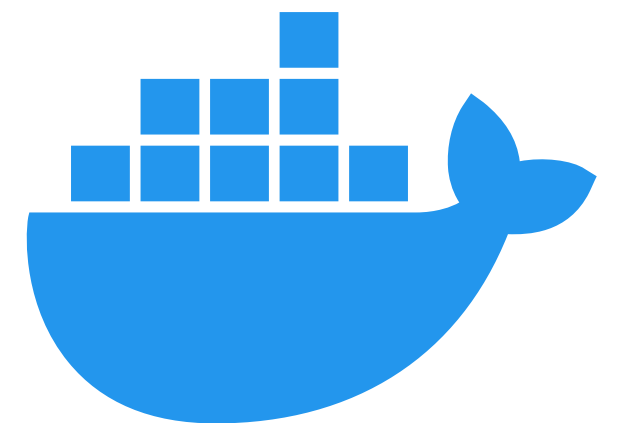
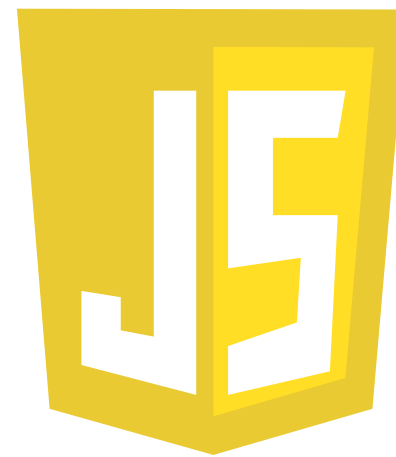




# Solution

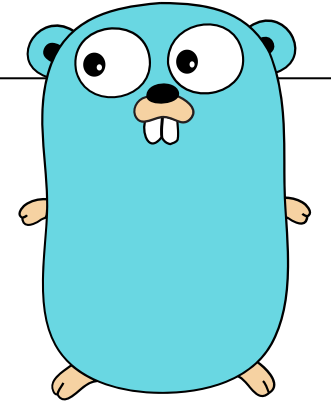


For now, make them run a docker container on their own machine, let them do whatever they want on that.





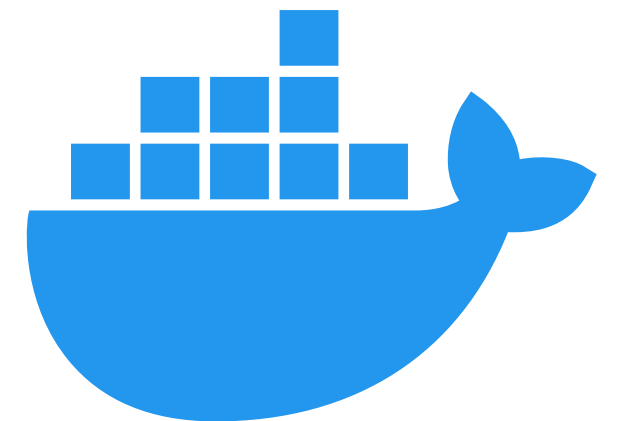
# Future



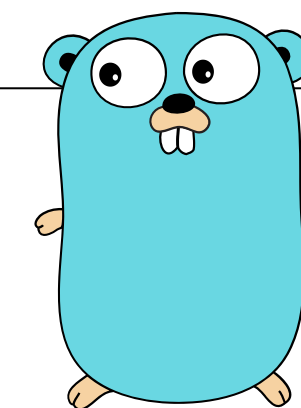
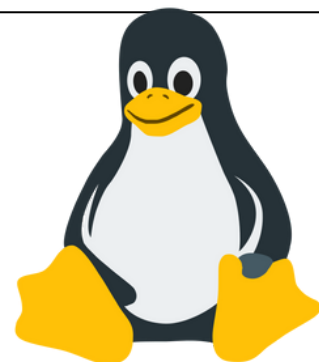
Make users log in to the website, and have their own shell environment that they can use (ssh ? 🤖 )



Add more commands for users to learn about, in a more summarized format than a full man page







# Demo

