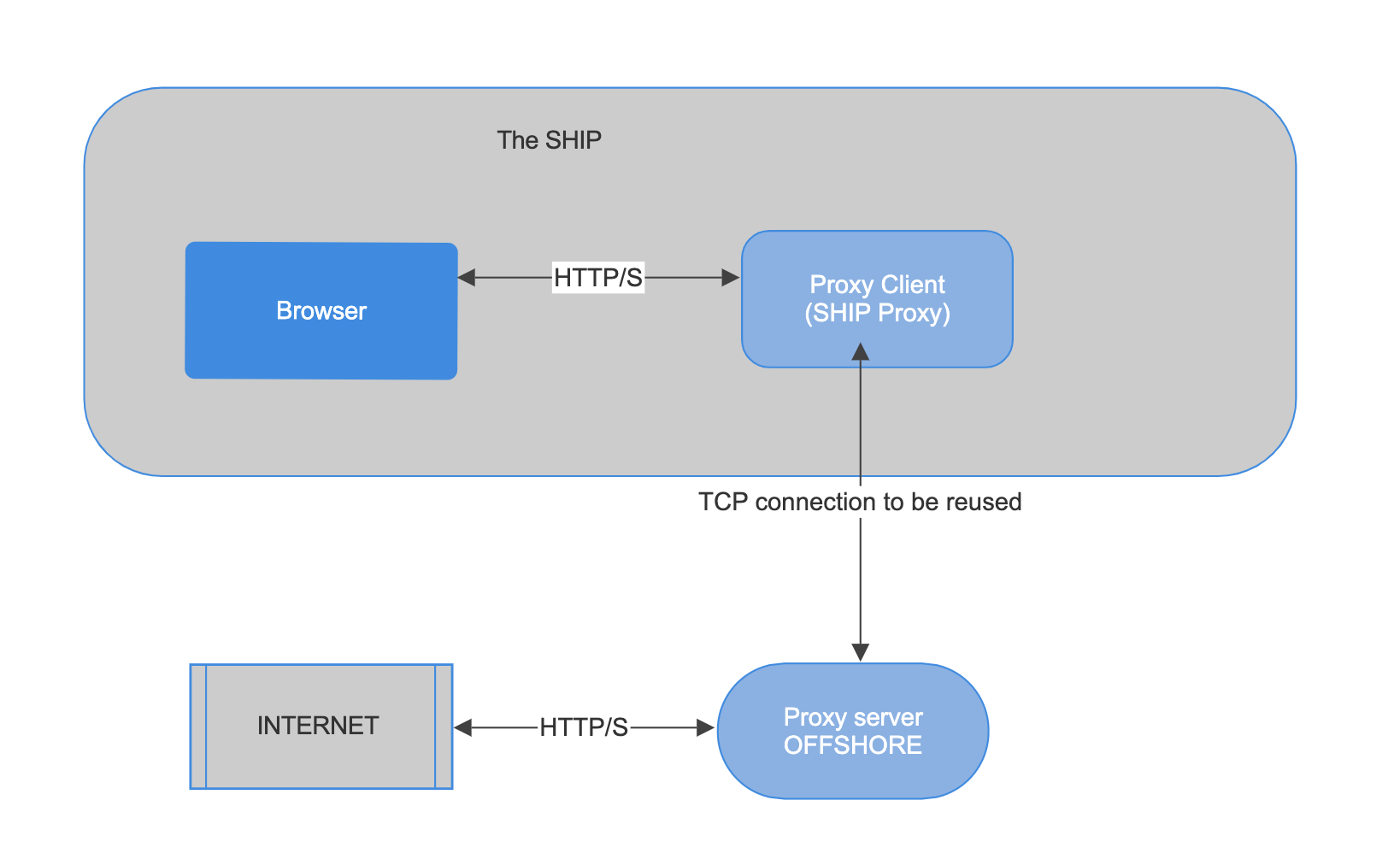
# The Ship



**Problem statement**

* You need to design the proxy client and proxy server.
* The system needs to handle the HTTP/s requests sequentially(one by one). For example, if 3 HTTP requests come to the proxy client parallelly, the system has to fulfil the request 1, then request 2 and finally, request 3.

**Solution**

* The ****proxy client**** manages a **queue** (BlockingQueue<String>) to ensure requests are processed sequentially.
* When a request comes, it is **added to the queue**.
* The client **processes requests one by one** and forwards them to the actual URL.
* The response from the requested URL is **returned immediately** to the browser.
* The **proxy server does not queue,** it simply forwards the request when it arrives.

**Testing**

* Start the Proxy Client (Spring Boot Application).
* Make Requests to the Proxy Client:
  + [http://localhost:8080/proxy?url=http://www.google.com](http://localhost:8080/proxy?url=http:/www.google.com)
* Expected Behavior:
  + The **first request is processed** immediately.
  + If multiple requests are sent at the same time, they are **queued** and processed **one by one**.
  + The **actual response from Google (or the target URL) is returned** to the browser or client.