# Protocol Specification

Overview

The goal of this protocol is to offer inventory management for a remote inventory. It uses TCP as the transportation protocol as it is important the data transfer be reliable, because otherwise, the receiver might not receive the whole text file.

The notation for messages is as follows:

1. CRLF denotes a new line
2. Anything in square brackets [] is optional
3. Anything in parentheses () is required
4. An asterisk (\*) denotes that the following entity can be repeated

This protocol has two basic categories, Request and Response messages. They are defined as follows

Request Messages

Request CRLF

Message-type \*(data )

Here, the Message-type can be as follows:

* Sorted: This is a request for the inventory file to be returned in a sorted manner. The data field must contain either “Name’, “Quantity”, or “Date”. The request will be thrown away if data is not exactly one of the three. Anything after data will be ignored (in other words, anything after the second word in the Sorted request message will be ignored).
* Delete: This is a request to delete a specific item. The data field contains a name to be deleted from the inventory. If the name supplied does not match the name of an item currently in the inventory, a ‘Not found’ error is returned.
* Update: This request is to update a quantity for a specific item. The data field contains a name and a quantity to be changed to. All entries after these 2 data fields will be ignored. ‘Not found’ error shows if invalid item name is supplied.

Response Messages

Response CRLF

(data | success | error) CRLF

[body]

The first line contains just the word “Response” to indicate that this is a response. The next line should contain exactly one of the following: “data”, “success”, or “error”. If the second line is “data”, then body should contain the data that was requested. If the second line is “success”, then the body is optional. If the second line is “error”, then body should contain what the error was with the request.