PROGRAMMING CHALLENGE - CLI OR SERVE

1.1 Challenge

The program should be designed to process:

- the name of an aggregate function; and
- a list of integers

It should simply apply the function to the list, and return the result to the user.

The program should be started from the command line. However, it should support being run in one of two alternate ways, depending on the command line arguments provided when it is started:

EITHER

The user may pass the list of integers on the command line, in which case the program will immediately process the list, print the result to the console, and exit.
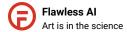
OR

The user may pass a port number, in which case the program will start a web server and listen for requests. The user may then pass the list of integers via a GET request to the program. On receiving a request, the program will process the list, write the result to the response within a simple HTML document, and continue listening for further requests.

In ***BOTH*** cases, the user must supply the name of the aggregate function via the command line at the time the program is started. The function can be either: `sum` or `max`.

1.2 Usage

```
cli_or_serve.py --aggregate <function> [--port number] [N1 N2 N3 ...]
```

1.2 Examples

Example 1

Command:

```
cli_or_serve.py --aggregate max 4 8 3
```

Output:

8

Example 2

Command:

```
cli_or_serve.py --aggregate sum --port 8080
```

Request:

```
curl 'localhost:8080?N=1+3+2+1'
```

Response:

```
<html>
  <head>
    <title>sum</title>
  </head>
  <body>
    <p>7</p>
  </body>
</html>
```