

## Task

To build a console application that will produce multiplication tables.

The finished application should be of production quality, regarding design, testing, maintainability etc.

## Assessment

The task will be assessed based on the following criteria:

- All requirements are fulfilled
- The code is readable
- The application is well designed
- The application is tested. (Include all test cases in your submission.)

## Requirements

The application writes a multiplication table based on a given number of rows and columns.

The table can be written to the console, to a comma-separated file, or to a HTML file.

## Inputs

- The application is run from the console
- The command line has the following format:  
`multiply.exe rows [cols] [output-format]`
- For example:  
`multiply.exe 4 5 csv`
- Valid values for `output-format` are `console`, `csv` and `html`.
- Valid values for `rows` and `cols` are integers between 1 and 20.

## Incomplete inputs

- If the user does not provide `output-format`, the results are output to the console.
- If the user does not provide the number of columns, the table should have the same width and height (`cols` = `rows`).

## Incorrect inputs

- If the user provides incorrect inputs, a user-friendly error message should be shown together with a reminder of the correct way to run the application.

## Outputs

- The application writes a multiplication table to the appropriate target.
- The multiplication table will have row and column headers.
- For CSV and HTML formats, the file can be created directly in the application folder.
- The file name should be in the following format:  
`multiply_rows_cols`
- For example:  
`multiply_3_7.csv`  
`multiply_4_4.html`
- When output to the console, the table should have right-aligned columns:  

	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
- The HTML file does not need pretty formatting (indenting etc).
- The output files must be valid. The comma-separated file should adhere to specifications and be importable into e.g. Excel. The HTML file must open and render correctly in Firefox.

## Delimitation

- Execution speed is irrelevant, within reasonable limits. Readability is valued higher than performance.