***Obs!* The highlighted text is just a demo –replace it with documentation for your problem statement.**

Data Name

# Problem statement:

A *teacher* (client) needs a program for *students* (users) who learn or use rational numbers.

The program shall help students to make basic arithmetic operations.

# Feature list

|  |
| --- |
| **Feature** |
| F1. **Add** *a number* to calculator. |
| F2. **Clear** calculator. |
| F3. **Undo** *the last operation* (user may repeat this operation). |

## Running scenario 1

|  |  |  |  |
| --- | --- | --- | --- |
|  | **User** | **Program** | **Description** |
| a |  | 0 | Shows total |
| b | 1/2 |  | Add number to calculator |
| c |  | 1/2 | Shows total |
| d | 2/3 |  | Add number to calculator |
| e |  | 5/6 | Shows total |
| f | 1/6 |  | Add number to calculator |
| g |  | 1 | Shows total |
| h | -6/6 |  | Add number to calculator |
| i |  | 0 | Shows total |

## Tasks

|  |  |
| --- | --- |
| **Id** | **Description** |
| T1 | Compute the greatest common divisor of two integers (see g, i) |
| T2 | Add two rational numbers (see c, e, g, i) |
| T3 | Implement calculator: init, add, and total |
| T4 | Implement user interface |

1. **Test case table for function gcd(a,b)**

|  |  |
| --- | --- |
| **Data: a, b** | **Result: gcd(a,b)** |
| 2 3 | 1 |
| 2 4 | 2 |
| 6 4 | 2 |
| 0 2 | 2 |
| 2 0 | 2 |
| 24 9 | 3 |
| -2 0 | ValueError |
| 0 -2 | ValueError |