

Small Group Activity - Handling operands with and without error terms

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Activity Kind

Small group activity

Purpose

The purpose of this activity is to consider how best to explain the requirements for handling operands with and without error terms.

Pre-requisite

Students must have participated in the Individual Activity - Test driven development of multiplication and division with error terms.

Tasking

As a small group and individually, the students are familiar with computing error terms by hand. Now the issue is how the calculator should support the use of error terms and how best to implement them.

The first thing to recognize the four states that the calculator must address with error terms when binary operators are used: 1) neither operand has an error term; 2) the first has an error term and the second does not; 3) the first does not have an error term but the second does; 4) both have an error term.

As a group, discuss these four situations and how the calculator should handle each. Be sure to capture your thoughts in your ENB **before** the group starts the discussion to be sure that you have your initial gut reaction captured. (Often, people can either forget their initial answer or be compelled by peer pressure into changing their mind. In many situations, your first answer is the best one. If you write down your initial answer **and** the discussion, you can go back later and reflect on what happened and maybe realize that your original idea was the better one. If you don't write down your original idea and why, it is much more difficult to reflect and recognize the error of changing your mind!)

The second task is figuring out how to capture this information in a concise and useful form, so you can remember it and compellingly communicate it to others. Based on your reading about UML, which UML diagram would be best to capture the above information and properly model how things change as the user adds and/or removes characters from the various input fields? From this discussion craft an appropriate UML Diagram and place a copy of it in your ENB as evidence that you have done this part of the task.

Lastly, where should this information be placed in your calculator code? Should you create a new class to capture this information (as an entity object) or should it become part of an existing class? Capture your thoughts in your ENB as your group discusses this.

Deliverable

Students are responsible for capture notes from these three aspects of this activity, in their ENB, as evidence that they actually did the work.

Submission

Each student must produce and submit an ENB for this day's work.