

# Small Group Activity - Start a UML Sequence Diagram

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## Activity Kind

Small Group Activity

## Purpose

The purpose of this activity is to start the detailed design for the GUI Units input selection.

## Pre-requisite

Students are expected to have completed

- Small Group Activity - Complete the creation of the UML Class Diagram

## Tasking

Each small group is expected to start this activity by brainstorming on a set of scenarios that reflect the various ways the user interface for the calculator can be used with respect to the unit of measure. One scenario that many teams in the past have ignored is starting the unit selection that depends upon a pop-up window for unit selection. With the window open, the flow does **not** continue to select one of a unit. Rather, the user clicks back onto the calculator window and proceeds to do something else. For many students, the result is a run-time error and a bunch of error-message trace-back displayed in the console window.

The group is expected to follow the brainstorm with a multi-vote and then produce a prioritized list of scenarios. Select one of the highest prioritized scenarios that the group believes would bring the most value to have documented in the form of a UML Sequence Diagram. Be sure to capture the brainstorm and the multi-voting results into your ENB as evidence that you followed this guidance. (Employers will be impressed if you can explain how to select which scenario to document using this method and be able to explain the resulting UML Sequence Diagram!)

As a group, leveraging the selected scenario, establish a list of user/system interactions as the first step. Then identify which Classes and then which methods within those Classes will be used in the flow from the first interaction to the last. Be sure to take careful notes about what parameters are passed into the methods, what the results from the methods are, and how that is used. Do not trust your memory with these details. You will forget and then you will question the usefulness of the sequence diagram. Capture this in your ENB so you can remember and get full benefit from this activity.

Once all the key aspects of the flow have been thought through and documented in your ENB, use an appropriate drawing program to produce the UML Sequence Diagram or draw it by hand if no one has such a drawing program.

## Deliverable

Each individual member of the group is expected to provide evidence of the documentation and the start of the resulting diagram in their ENB.

The students **must** also take notes during the activity and record any concerns or doubts in their ENB. If there are no notes from this activity in an individual's engineering notebook, our only conclusion must be that you did not participate.

## Submission

Students are expected to **complete** this part of their ENB prior to starting the next activity.