Assignment 3 (design)

Submit Assignment

- **Due** Sunday by 7pm
- **Points** 30
- **Submitting** a file upload
- **File Types** pdf

The page called "Problem Solving" discusses five steps for an approach to solving a problem and learning from the process. You will create a design document for project **3.a** based on the first three of those five steps. You will then write code based on your design (the fourth step), which will be submitted on TEACH as usual (together with the code for projects 3.b and 3.c). You're allowed to deviate from your design if necessary. You will also write your reflections on the problem-solving process (the fifth step).

Your design document should contain the three following sections:

- **Understanding:** Describe in your own words what the assignment is asking of you. What parts of the assignment require techniques that are new this week, and why? Describe the techniques.
- **Testing Plan:** Design some tests you can perform to verify that your program meets the given specifications. They should be representative enough that if your program passes them, you would have a high level of confidence that your program is ready to be submitted. Having just a couple of tests will not meet that criterion. Create a table with two columns: one for the description of each test and one for the expected results of each test. These are not meant to be general descriptions, but rather specific concrete examples of inputs and outputs. Try to come up with tests that will check different aspects of the program's functioning, and be creative in thinking of situations that might "break" the program. You do not need to test whether the inputs are legal - just whether the program behaves correctly when given legal inputs.
- **Design:** Describe or draw out your design for how the program should behave using pseudocode or flowcharts, following the Pseudocode & Flowchart Guidelines. You do not need to do both pseudocode and a flowchart - just one or the other.