Dear students,

Below are the most frequently asked questions of this week's lab (week 7):

Question 1: Is there a method that we can call to check for consistency or closedness of the table?

Answer:

No, we do not provide pre-implemented methods for consistency or closedness checks. It is your task to implement these checks yourself (see `checkForConsistent` and `checkForClosed` in `ObservationTable.java`).

Question 2: What is the difference between consistency and closedness?

Answer:

For the formal definition of consistency and closedness, please refer to the following papers: https://dl.acm.org/doi/10.1145/2967606 and https://doi.org/10.1016/0890-5401(87)90052-6. Below is a short description of consistency and closedness:

- Consistency: check whether access sequences that bring you to the same state will also make the exact same transition for each one-letter extension (adding a new symbol from the alphabet) that you add to the access sequences. If this holds, then the table is considered to be consistent.
- Closedness: check whether we know what the next transition would be for each and every one-letter extension in the access sequences.

Question 3: What are S, A and E, and what does $S \cdot A$ mean?

Answer:

S is the set of all prefixes of your language, A is the alphabet of your language (set of all possible one-letter symbols that can occur) and E is the set of suffixes in your language. The "$\cdot$" is defined as the concatenation operation in Language theory. Thus $S \cdot A$ is the set of all one-letter extensions that you can create by concatenating an element from A to an element of S.

Question 4: When will the final lab assignment be released?

Answer:

We are finalizing the final assignment and we will release it before the end of Lab 4. You can already start working on part of the final assignment, as some of the tasks of the final lab are already included in each assignment (the preparation tasks that are listed in Lab 1 to 4). These tasks will be part of the final assignment.