Exercise 1: $\omega$-regular expressions

(a) Let $\Sigma = \{\text{send, ack, idle}\}$. Give an $\omega$-regular expression or an NBA that represents each of the following properties:

(i) There is no ack before the first send.

(ii) From some point on there is only idle.

(iii) There is a send, which is eventually followed by an ack.

(iv) There are only finitely many sends.

(v) There are infinitely many ack.

(vi) Every send is eventually followed by an ack.

(b) Which one of the formalisms do you consider most intuitive for each case? why?

Exercise 2: Lecture Evaluation (optional)
We would like to make sure you are following the lecture and having fun at the same time.

(a) What can we improve about the lecture?

(b) Briefly name the main concepts that you have found interesting and what you have learned about them during the last lectures.