CS3350 – Programming project – 2 options: Pick ONE!

Option 1. Implement in Java the following tool:

- input: regular expression
- output: the minimized DFA that recognizes the regular expression passed as an input

You should offer the possibility to visualize the DFA different ways; e.g.,

- formal description
- graph

You should also design follow-up methods that allow to check whether a given string belongs to the language originally passed as an input.

Option 2. Implement in Java the following tool:

- input: a Context-Free Grammar
- output: a PDA that recognizes the language generated by the above grammar

You should offer the possibility to visualize the DFA different ways; e.g.,

- formal description
- graph

You should also design follow-up methods that allow to check whether a given string belongs to the language originally passed as an input.

Practical information:

- Deadline for picking the project: **February 14 at 11:59pm via email** to TA and instructor.
  Important Note: Subject line of your email should start with "[CS3350][Project Option]" and continue with your first name and last name.

- Deadline for submitting the project: **April 27 at 11:59pm via email** to TA and instructor.
  Important Note: Subject line of your email should start with "[CS3350][Project Submission]" and continue with your first name and last name.

- **Requirement worth 5 points on your project:**
  You have to meet with your TA at least 10 days before the submission deadline to make sure you are on track. You are expected to contact him to make an appointment with him and come prepared (i.e., having started to work on your project and having a reasonable first version to show).

- **What should be turned in on April 27?**
  - The fully-documented source code of your project
  - A readme txt file
  - A brief report that explains what you implemented, how it works, and why it works.