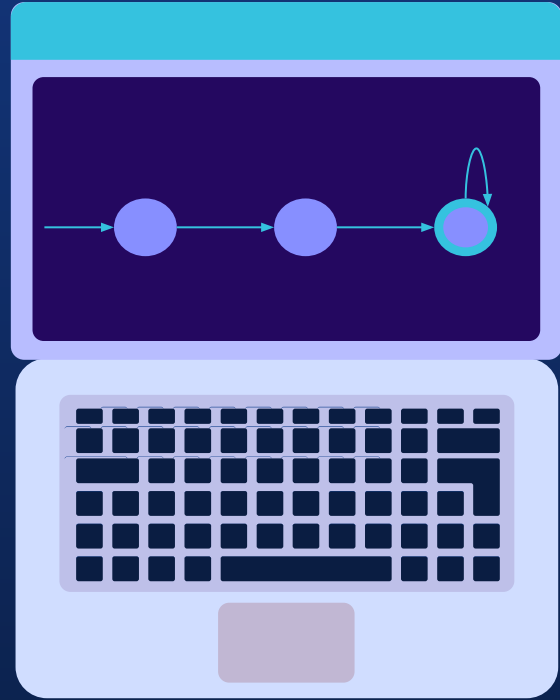


Improved Visualization for Formal Language: Milestone 5

<https://kmcnear2022.github.io/>

Group Members: Chris Pinto-Font, Vincent Borrelli, Andrew Bastien, Keegan McNear





Milestone 5 Goals

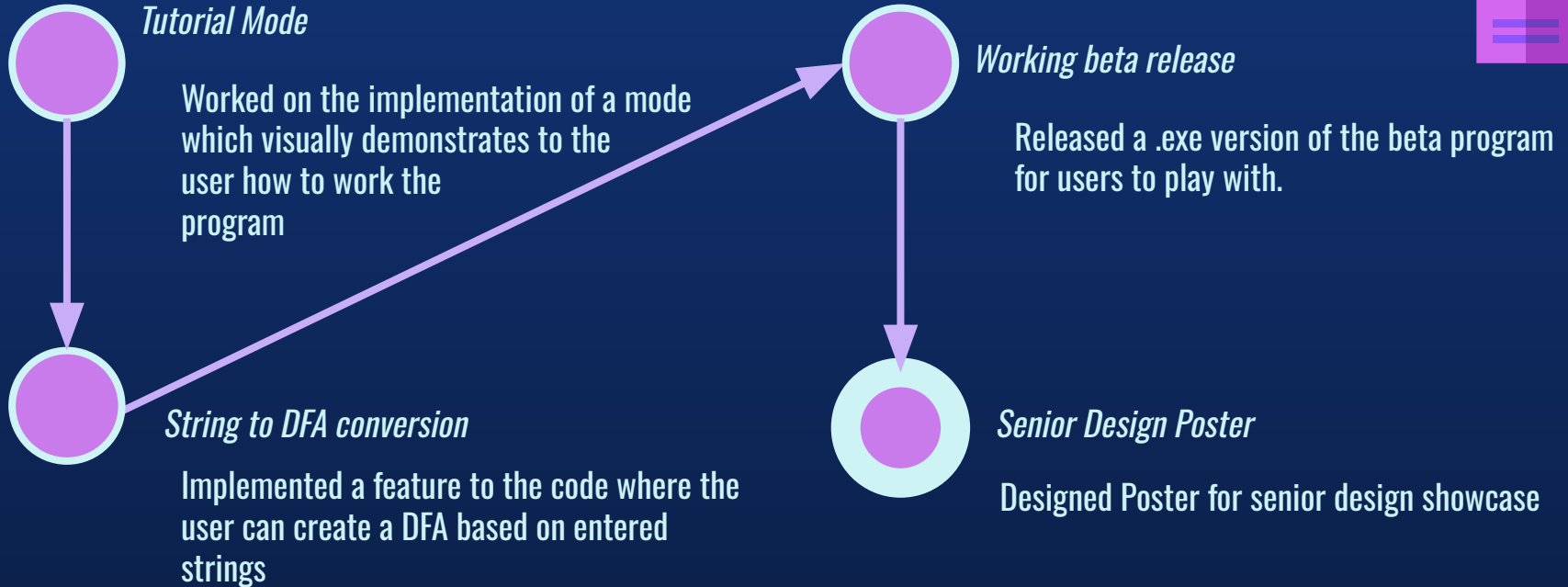
We set out to improve the navigability of the program through reorganizing the GUI to accommodate new features. We too set out to implement requested features and foundational program components.

The completion of our code base refactoring assisted in this.





Milestone Four Deliverables



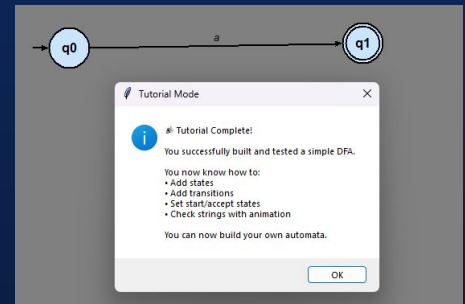
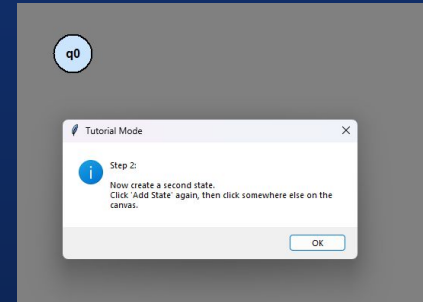
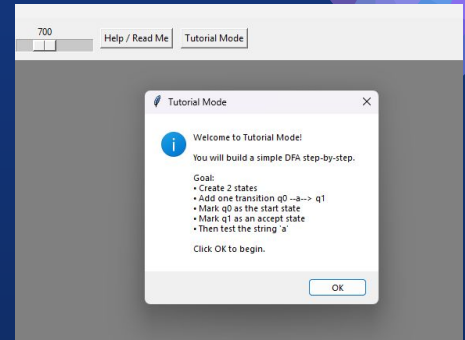
Advisor Involvement

We met with Dr prior to spring break as to reconsider our goals and flesh out what's needed to improve our NFA feature implementation and which features will be crucial for our final presentable product.



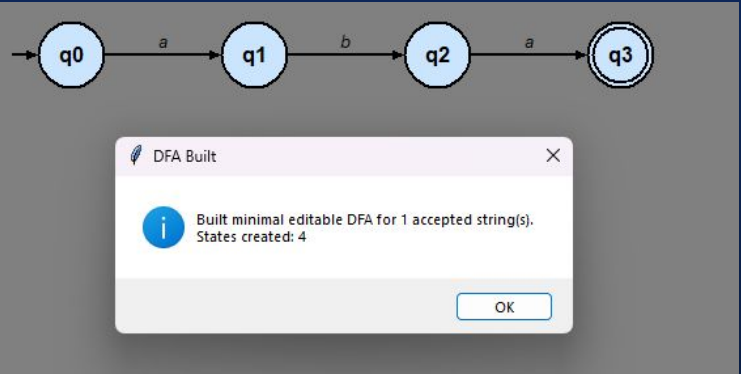
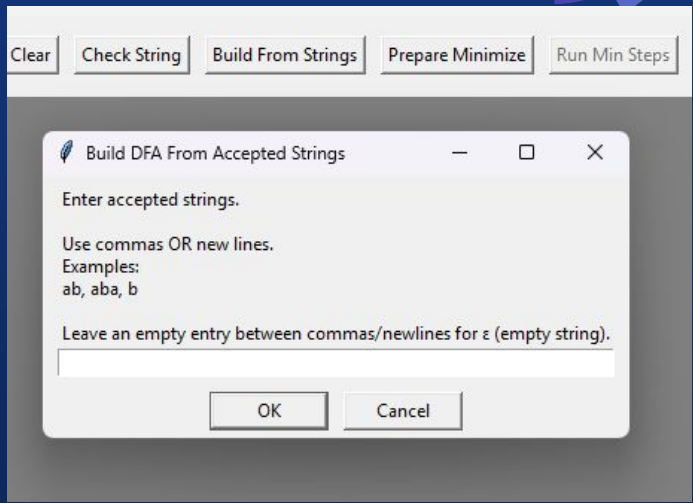
Tutorial Mode

Serves to showcase the most basic DFA construction elements of the program as to take the guesswork out of using the program for more inexperienced users, may be expanded to showcase more features however the scope of the read-me file and anticipated user background knowledge for other related DFA features makes the necessity of each expansion dubious.



Building DFAs from strings




Feature allows the user to build a functional DFA based on entered strings, needs to be stress tested for complex strings and many items.





Public Release Version for user input

Released a separate independently executable beta release version of the program to gauge wider user feedback based on requests for a working version of the grapher. We hope to use this to outsource the bug testing and feature requests process via this, with a possible questionnaire being attached.

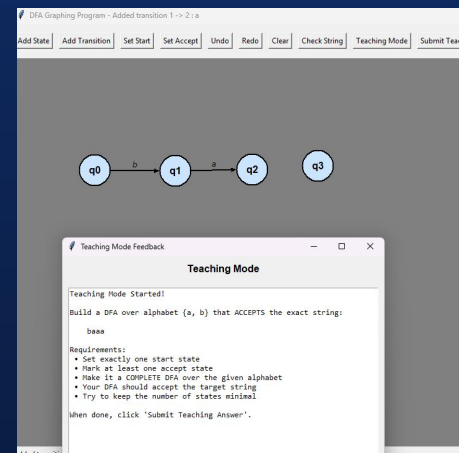
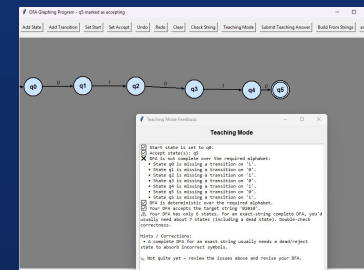
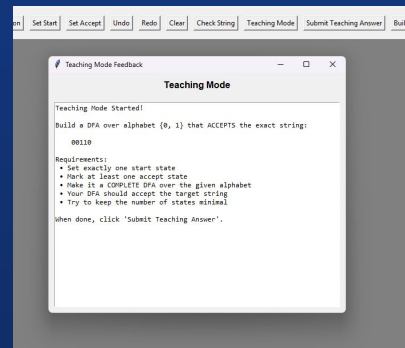
 UpdateVersGDFA.exe	Add files via upload
 legacy.py	Fixing transition popup on tkinter gui
 legacyGDFA.exe	Add files via upload





Teaching Mode Beta

Worked on implementing a basic version of the much requested “teaching mode” to instruct the user on pragmatic DFA construction via prompts. This will be expanded upon and finalized for milestone 6, with a more interactive take on the construction process (real time comments on user decisions as opposed to a construct and check method)





Live Demos

The screenshot shows a software window titled "DFA Graphing Program". The menu bar includes the following items: Add State, Add Transition, Set Start, Set Accept, Undo, Redo, Clear, Check String, Teaching Mode, Submit Teaching Answer, Build From Strings, Prepare Minimize, Run Min Steps, Play, Pause, Step, -- Step, Speed(ms): 700, Help / Read Me, and Tutorial Mode. The main area of the window is a large, empty gray rectangle. At the bottom left of the window, the text "Ready" is visible. In the bottom right corner, there is a Windows notification from "GET INTERNET SECURITY" titled "Microphone Monitor". The notification text reads: "Shipping Tool (1134) is accessing your microphone." and "Do not notify for this application. End process accessing the microphone." Below the notification is a "Learn more about this message" link and a red bar with the text "Renew subscription" and "Your computer is not protected".





Live Demos

DFA Graphing Program

Add State Add Transition Set Start Set Accept Undo Redo Clear Check String Teaching Mode Submit Teaching Answer Build From Strings Prepare Minimize Run Mini Steps Play Pause Step -- -- Step Speed(ms): 700 Help / Read Me Final M

Ready



Milestone 5 Progress



Task	Completion %	Chris	Vincent	Andrew	Keegan	To Do
NFA dead state and bug fixing	80%	30%	30%	20%	20%	Add dead state creation
Canvas GUI upgrade with quality of life features	100%	30%	15%	40%	15%	Make further improvements as they arise and continue to rearrange buttons and GUI features
Tutorial mode	80%	25%	25%	15%	15%	Continue to bug test and stress test current system
String input converted into a DFA	80%	30%	30%	10%	10%	Continue to bug test and stress test current system
User feedback	80%	40%	20%	20%	20%	Continue to collect user input/judge input based on .exe release package
Update Read Me File	100%	30%	30%	20%	20%	Continue making updates as they arise

Milestone 6 Plan

Task	Chris	Vincent	Andrew	Keegan
Finalized Touches on user experience/bug testing	Bug Fixer and Project stress tester	Bug Fixer and Project stress tester	Bug Fixer and Project stress tester	Bug Fixer and Project stress tester
Zoom out/item selection and moving feature	Bug Fixer/Code Contributor and researcher	Bug Fixer/Code Contributor and researcher	Co-Lead coder and development head	Co-Lead coder and development head
Teaching mode	Bug Fixer/Code Contributor and researcher	Bug Fixer/Code Contributor and researcher	Co-Lead coder and development head	Co-Lead coder and development head
Update Poster as new features are added	Co-lead Writer	Co-lead Writer	Advisor	Advisor
Update “read me” file	Co-lead Writer	Co-lead Writer	Advisor	Advisor



Questions?

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