Counterexample Visualizer Tool Feedback

Demographics

- 1. What is your role? (Developer, Tester, DevOps, etc.)
- 2. How many years of experience do you have in software development?

Experience with Verification Tools

- 3. Have you used model-checking based verification tools before? (CBMC, UCLID5, others)
- 4. How often do you use these tools? (daily, weekly, monthly, rarely)
- 5. What are the biggest challenges you face when using these tools?

Current Process

- 6. How do you currently analyze counterexamples from these tools?
- 7. Are you satisfied with your current process of analyzing counterexamples? Why or why not?
- 8. What tools or techniques do you currently use to help with this analysis?

Potential Features

- 9. Would you find a tool that visualizes counterexamples useful?
- 10. Which of the following features would you find most useful in such a tool?
 - Interactive timeline of variable states
 - Search function to quickly find a specific variable or state
 - Integration with your preferred development environment (VSCode, etc.)
 - Detailed view of variable states
 - Ability to annotate or add comments to certain states
 - Comparison view to compare variable states across different steps

- Breakpoints: The ability to set breakpoints at specific states or variable assignments
- Highlighting assertion violations
- Tutorial or guidance: A built-in guide or tutorial that explains how to use the tool and interpret the visualized counterexamples could be beneficial, especially for new users.
- 11. Are there any other features you would like to see in such a tool?

Integration

- 12. Would you prefer a standalone tool, or a tool that integrates with your current development environment?
- 13. If an integrated tool, which development environment do you use? (VSCode, IntelliJ, Eclipse, etc.)

Platform

14. Which operating system do you typically use for development? (Windows, Linux, macOS, etc.)

Testing

15. Would you be willing to participate in future user testing or provide feedback on the tool once it's developed?