Demo:

(Re)naming of program variables

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The problem

During symbolical execution. . .

- program variables from different scopes are put into a single global namespace

$$\langle\{\texttt{int x;}\}\rangle\phi \wedge \langle\{\texttt{int x;}\}\rangle\psi$$

- new variable declarations are introduced within programs

$$\langle\{\texttt{m().n(); int var\_1;}\}\rangle$$

$\rightarrow$ Possible naming conflicts

The solution

KeY now…

- changes existing variables' names when executing a declaration which causes a conflict in the global namespace:
  - "Outer renaming": The *old* variable's name is changed
  - "Inner renaming": The *new* variable's name is changed

- chooses sufficiently unique names for newly introduced variables