YouVerify

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Griffin Prechter

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class State.State

Abstract class template for a representation of State in *YouVerify*.

abstract add_path_constraint(*cond*)

This abstract method is invoked when the framework wants to add an assumption to the current state.

Parameters cond – The condition to be affixed to the path constraint.

Returns None

abstract advance_pc(*i*)

This abstract method is invoked when the framework wants to advance the program counter.

Parameters i – The number of statements to advance through.

Returns None

abstract assign_variable(*var*, *val*)

This abstract method is invoked when the framework wants to assign a value to a variable.

Parameters

- var – The identifier of the variable being assigned to.
- val – The value to be assigned to the variable.

Returns None

abstract conditional_branch(*cond*, *pc*)

This abstract method is invoked when the framework reaches a conditional branching statement. Here, a developer would likely want to implement state splitting.

Parameters

- cond – The condition guarding the branch.
- pc – The destination program counter for the branch.

Returns None

abstract property current_statement

This abstract property is invoked to retrieve the next statement to be executed by the symbolic interpreter.

Returns The next Statement object to be *executed*.

Return type Statement

abstract get_variable(*var*)

This abstract method is invoked when an identifier is evaluated and a variable is to be fetched from the states variable store.

Parameters `var` – The identifier of the variable that will be retrieved.

Returns The value of the variable that was retrieved.

`abstract next_state()`

This abstract method is invoked by the framework when before the next statement is to be executed. This gives the `State` object the opportunity to modify the backend and setup for the next statement execution. A developer would modify this to change how the paths of a program are explored and how state is handled.

Returns `True` if there is more state to be executed, `False` otherwise.

Return type bool

`abstract unconditional_branch(`*pc*`)`

This abstract method is invoked when the framework reaches an unconditional branching statement.

Parameters `pc` – The destination program counter for the branch.

Returns None

`Wrappers.unary_operator_wrapper(`*f*`)`

The wrapper takes in the original unary operator as its parameter and optionally returns a new function with the new behavior.

Parameters `f` – The unary function to be wrapped.

Returns A new unary function.

`Wrappers.binary_operator_wrapper(`*f*`)`

The wrapper takes in the original binary operator as its parameter and optionally returns a new function with the new behavior.

Parameters `f` – The binary function to be wrapped.

Returns A new binary function.

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