

introduce invariant

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This command is part of the experimental [refinement editor](#).

The *introduce invariant* command refines a specification statement to introduce a new invariant. It applies the following inference rule of the refinement calculus.

$$\frac{\vdash? P \wedge I \Rightarrow J \quad \vdash? Q \wedge I \Rightarrow J \quad \Delta F[P, J, Q]}{\vdash? \Delta F[P, I, Q]}$$

where J is the new invariant.

No [code](#) is implicitly generated by this refinement rule.

The *introduce invariant* command is applicable when any specification statement $\Delta F[P, I, Q]$ in a goal is inspected.

The new invariant J is entered into a dialogue box using the syntax of a Z predicate. The default response is the previous response. Alternatively, if a suitable predicate is displayed in the same window, that can have been selected first (crossed). The predicate is typechecked in the environment of the inspected specification statement.

1. Tactic example

“introduce invariant” “J” p



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This example applies the *introduce invariant* command to specification statement p using the predicate J .

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