

sequential composition

[/Reference manual](#)/[Z-related commands](#)/[Refinement commands](#)

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

The *sequential composition* command refines a specification statement to two specification statements that will be executed sequentially. It applies the following inference rule of the refinement calculus.

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

where R is the mid-condition.

The [code](#) that is implicitly generated by this refinement rule is the sequential composition of the code implicitly generated by the two specification statements.

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

The mid-condition R 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 mid-condition is typechecked in the environment of the inspected specification statement.

1. Tactic example

“*sequential composition*” “ R ” p

This example applies the *sequential composition* command to specification statement p using the mid-condition R .

A tactic that applies the *sequential composition* command must be executed by *play tactic*; it is not applicable under *apply tactic* as the resulting code would not be accessible to the *code* command.

IT 20-Nov-2000