valofexternal() — Obtain value of external global

Description

valofexternal(name) returns the contents of the external global matrix, vector, or scalar whose name is specified by name; it returns \( J(0,0,.) \) if the external global is not found.

Also see Linking to external globals in [M-2] Declarations.

Syntax

\[
\text{transmorphic matrix} \quad \text{valofexternal(string scalar name)}
\]

Remarks and examples

Also see [M-5] findexternal(). Rather than returning a pointer to the external global, as does findexternal(), valofexternal() returns the contents of the external global. This is useful when the external global contains a scalar:

\[
\begin{align*}
\text{tol} &= \text{valofexternal("tolerance")} \\
\text{if} \ (\text{tol}==J(0,0,.)) \ & \text{tol} = \ 1e-6
\end{align*}
\]

Using findexternal(), one alternative would be

\[
\begin{align*}
\text{if} \ ((p = \text{findexternal("tolerance")})==\text{NULL}) \ & \text{tol} = \ 1e-6 \\
\text{else} \ & \text{tol} = \ *p
\end{align*}
\]

For efficiency reasons, use of valofexternal() should be avoided with nonscalar objects; see [M-5] findexternal().

Conformability

\[
\text{valofexternal(name)}:
\]

\[
\begin{align*}
\text{name:} & \quad 1 \times 1 \\
\text{result:} & \quad r \times c \quad \text{or} \quad 0 \times 0 \text{ if not found}
\end{align*}
\]

Diagnostics

valofexternal() aborts with error if name contains an invalid name.

valofexternal(name) returns \( J(0,0,.) \) if name does not exist.
Also see

[M-5] **findexternal()** — Find, create, and remove external globals

[M-4] **Programming** — Programming functions