## DAVIOC

## **Binding Strengths**

For two entities X and Y that are adjacent in an expression (that is, XY), the binding strength between them and the result of the bind is shown in this table:

|   |     | Y |     |   |     |   |     |     |     |     |     |     |     |     |   |
|---|-----|---|-----|---|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|---|
|   |     | Α |     | F |     | н |     | МОР |     | DOP |     | DOT |     | IDX |   |
| x | А   | 6 | А   | 3 | AF  | 3 | AF  | 4   | F   |     |     | 7   | REF | 4   | А |
|   | F   | 2 | А   | 1 | F   | 4 | F   | 4   | F   |     |     |     |     | 4   | F |
|   | н   |   |     | 1 | F   | 4 | F   | 4   | F   |     |     |     |     | 4   | Н |
|   | AF  | 2 | А   | 1 | F   |   |     |     |     |     |     |     |     |     |   |
|   | MOP |   |     |   |     | 4 | ERR |     |     |     |     |     |     |     |   |
|   | DOP | 5 | MOP | 5 | MOP | 5 | MOP |     |     |     |     |     |     |     |   |
|   | JOT | 5 | MOP | 5 | MOP | 5 | MOP | 4   | F   |     |     |     |     |     |   |
|   | DOT | 6 | ERR | 5 | MOP | 5 | MOP |     |     | 6   | ERR |     |     |     |   |
|   | REF | 7 | А   | 7 | F   | 7 | Н   | 7   | MOP | 7   | DOP |     |     |     |   |
|   | IDX | 3 | ERR | 3 | ERR | 3 | ERR |     |     |     |     |     |     |     |   |

where:

| where. |   |  |  |  |  |  |
|--------|---|--|--|--|--|--|
| Α      | : *Array, for example, 0 1 2 'hello' α ω  |  |  |  |  |  |
| F      | : *Function (primitive/defined/derived/system), for example, + - +.× myfn $\Box CR \{\alpha \ \omega\}$ |  |  |  |  |  |
| н      | : *Hybrid function/operator, that is, 🖊 🤺 🔪 🕇   |  |  |  |  |  |
| AF     | : Bound left argument, for example, 2+  |  |  |  |  |  |
| MOP    | : *Monadic operator, for example, ¨ 🎽 &   |  |  |  |  |  |
| DOP    | : Dyadic operator, for example, 诺 🔋 🍯 🗏   |  |  |  |  |  |
| JOT    | : Jot, that is, compose/null operand •  |  |  |  |  |  |
| DOT    | : Dot, that is, reference/product .   |  |  |  |  |  |
| IDX    | : square-bracketed expression, for example, [α+ιω]  |  |  |  |  |  |
| ERR    | : Error   |  |  |  |  |  |
|        |   |  |  |  |  |  |

\* indicates a "first-class" entity, which can be parenthesised or named

In this table:

- the higher the number, the stronger the binding
- an empty field indicates no binding for this combination; an error.

For example, in the expression **a b**.**c**[d], where **a**, **b**, **c** and **d** are arrays, the binding proceeds:

a b . c [d] 6 7 6 4 A binding strengths between entities

- → a (b.) c [d] 0 7 4
- → a (b.c) [d] 6 4
- → (a(b.c))[d]