8. Prolog Flags and Directives

In **Standard Prolog Flags** are reserved atoms with an associated predefined value, which define some parameters of a processor. Some of them are fixed with a given processor; their value is **implementation defined** and cannot be updated. Some others may be modified by the user and are said **changeable**.

**Directives** are predefined built-in predicates. They are used in Prolog text only as queries to be immediately executed when loading it. They are aimed at initialising changeable flags, or at updating the predefined operator table or the character conversion table. They are also used to influence the preparation of Prolog texts or term inputting during program execution. Such directives are needed in particular because there is no “consulting” built-in predicate in **Standard Prolog**.

### 8.1 Unchangeable flags

They concern the integer arithmetic and the maximum arity of a predicate or functor. Their default value is **implementation defined**. Their current associated value may be obtained in a program by using the built-in predicate `current_prolog_flag/2`.

**Flag: bounded**

**Possible values:** true, false

– It is used in the definition of I (the integers, Section 6.1.2).

**Flag: max arity**

**Possible value:** The default value only (denoted `maxarity` or unbounded).

– `maxarity` is a positive integer which is the maximum arity allowed for any compound term.
– The value is unbounded when the processor has no limit for the number of arguments for a compound term.
Flag: integer.rounding.function

Possible values: down, toward.zero

- It is used in the definition of \( I \) (the integers, Section 6.1.2).

Flag: max.integer

Possible value: The default value only (denoted maxint).

- It is used in the definition of \( I \) (the integers, Section 6.1.2).

Flag: min.integer

Possible value: The default value only (denoted minint).

- It is used in the definition of \( I \) (the integers, Section 6.1.2).

8.2 Changeable flags

Their current associated value may be updated during the preparation of a Prolog text by the directive \texttt{set.prolog.flag/2}, or in a program by using the built-in predicate \texttt{set.prolog.flag/2}. Current flags and values may be obtained in a program by using \texttt{current.prolog.flag/2}.

Flag: char.conversion

Possible values: on, off

Default: on

- If the value is on, unquoted characters in Prolog texts being prepared for execution or when inputting terms are converted according to the current character conversion table (9.1.2).
- If the value is off, unquoted characters in Prolog texts and term inputting are not converted.

Flag: debug

Possible values: on, off

Default: off

- If the value is off, procedures have the meaning defined in Standard Prolog.
- If the value is on, the effect of executing any predication is implementation defined.