

Load Core Template

B/Icore

Purpose

To load the core language definition for Inform, which means creating the basis for its hierarchy of kinds.

B/Icore.§1 Header; §2 Macros; §3 Group 1; §4 Group 2; §5 Group 3; §6 Groups 4 and 5; §7 Tail

§1. **Header.** The following mass of type definitions is not heavily subdivided into paragraphs since it's read so early in Inform's run that "Include..." sentences haven't had time to be read yet – so they aren't easy to customise. (Except by putting a whole customised version of the file into the relevant **Materials/I6T** folder.)

The `{-lines:type}` command causes all subsequent lines to be sent as parameters to the `{-type:...}` command, until the next `{-endlines}` command.

```
{-callv:Types::IDs::make_type_IDs_table}
{-lines:type}
#DEFAULTS:
defined-in-source-text:no
is-incompletely-defined:no
uses-signed-comparisons:no
can-coincide-with-property:no
named-values-created-with-assertions:no
has-i6-GPR:no
i6-printing-routine:DecimalNumber
i6-printing-routine-actions:DA_Name
multiple-block:no
constant-compilation-method:none
#KIND-VARIABLE:
group:1
constant-compilation-method:none
i6-printing-routine:DA_Number
i6-printing-routine-actions:DA_Number
index-priority:0
#KIND-OF-KIND:
group:2
constant-compilation-method:none
i6-printing-routine:DA_Number
i6-printing-routine-actions:DA_Number
index-priority:0
#BASE-KIND:
group:3
instance-of:VALUE_TY
index-priority:3
#KIND-CONSTRUCTOR:
group:4
instance-of:VALUE_TY
index-priority:7
```

§2. **Macros.** New kinds of value cause some I7 source to be generated, following various combinations of the macros below. This used to be a mechanism to get around the lack of support for generic phrases in Inform, and since generics are now part of the design, macros like this are used just to create an awkward family of variables which circumvent the typelessness of the I6 parser:

```
*UNDERSTOOD-VARIABLE:
<type> understood is a <type> which varies.
*END
```

§3. **Group 1.** These are data types used in type-checking but not representing specific kinds of value at run-time.

The + notation indicates a type name which NI requires us to construct, and with this specific name.

```
+VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:value
plural:values
! Matches any value at all
+POINTER_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:pointer value
plural:pointer values
! Matches any value whose runtime representation is a pointer to a block
+WORD_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:word value
plural:word values
! Matches any value whose runtime representation is a single word
+ARITHMETIC_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:arithmetic value
plural:arithmetic values
+ENUMERATED_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:enumerated value
plural:enumerated values
SAYABLE_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:sayable value
plural:sayable values
COMBINED_VALUE_TY:
apply-macro:#KIND-OF-KIND
singular:combined value of any arity
plural:combined values of any arity
```

§4. Group 2. Data types.

```

+OBJECT_TY:
apply-macro:#BASE-KIND
singular:object
plural:objects
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:nothing
i6-printing-routine:PrintShortName
i6-printing-routine-actions:DA_Name
constant-compilation-method:special
description:an object
index-priority:1
index-default-value:nothing
specification-text:Objects are values intended to simulate physical things: places, people, things,
... and so on. They come in many kinds. The special value 'nothing' is also allowed, and can
... be used to mean 'no object at all'.

+NUMBER_TY:
apply-macro:#BASE-KIND
singular:number
plural:numbers
instance-of:WORD_VALUE_TY
instance-of:ARITHMETIC_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:0
uses-signed-comparisons:yes
can-exchange:yes
has-i6-GPR:yes
explicit-i6-GPR:DECIMAL_TOKEN
i6-printing-routine-actions:DA_Number
constant-compilation-method:literal
description:a number
documentation-reference:kind_number
index-priority:2
index-default-value:0
specification-text:Whole number in the range -32768, -32767, ..., -2, -1, 0, 1, 2, 3, ..., 32767: s
... mall numbers can be written textually as 'one', 'two', 'three', ..., 'ten', 'eleven', 'twe
... lve'. (A much larger number range is allowed if we compile the source to Glulx rather than
... the Z-machine: see the Settings panel.)

+TRUTH_STATE_TY:
apply-macro:#BASE-KIND
singular:truth state
plural:truth states
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:false
can-exchange:yes
loop-domain-schema:for (*1=0: *1<=1: *1++)
has-i6-GPR:yes

```

```

explicit-i6-GPR:TRUTH_STATE_TOKEN
i6-printing-routine:DA_TruthState
i6-printing-routine-actions:DA_TruthState
constant-compilation-method:literal

description:something which is either true or false
documentation-reference:kind_truthstate
index-default-value:false
specification-text:The state of whether something is 'true' or 'false'. (In other computing languag
... es, this might be called 'boolean', after the 19th-century logician George Boole, who firs
... t realised this was a kind of value.)

+TEXT_TY:
apply-macro:#BASE-KIND
singular:text
plural:texts

instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:EMPTY_TEXT_VALUE

i6-printing-routine:PrintText
constant-compilation-method:special

description:some text
index-default-value:""
specification-text:Some text in double quotation marks, perhaps with substitutions written in squar
... e brackets.

+INDEXED_TEXT_TY:
apply-macro:#BASE-KIND
singular:indexed text
plural:indexed texts

instance-of:POINTER_VALUE_TY
instance-of:SAYABLE_VALUE_TY
has-native-constants:no
multiple-block:yes
heap-size-estimate:256
cast:TEXT_TY
cast:SNIPPET_TY
can-exchange:yes

recognition-only-GPR:INDEXED_TEXT_TY_ROGPR
distinguisher:INDEXED_TEXT_TY_Distinguish
i6-printing-routine:INDEXED_TEXT_TY_Say
constant-compilation-method:none

description:an indexed text
documentation-reference:kind_indexedtext
index-default-value:""
specification-text:A flexible-length form of text which can be internally altered and searched. Inf
... orm automatically changes text to this format when necessary.

+UNICODE_CHARACTER_TY:
apply-macro:#BASE-KIND
singular:unicode character
plural:unicode characters

instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY

```

```

default-value:32
constant-compilation-method:literal
description:a Unicode character
index-default-value:unicode 32 (<i>a space</i>)
specification-text:A single character - a letter or item of punctuation.

+USE_OPTION_TY:
apply-macro:#BASE-KIND
singular:use option
plural:use options
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:0
loop-domain-schema:for (*1=0: *1<NO_USE_OPTIONS: *1++)
i6-printing-routine:PrintUseOption
constant-compilation-method:special
description:the name of a use option
index-priority:6
index-default-value:the ineffectual option
specification-text:One of the optional ways to configure Inform, such as the 'authorial modesty opt
... ion'.

+SNIPPET_TY:
apply-macro:#BASE-KIND
singular:snippet
plural:snippets
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:101
i6-printing-routine:PrintSnippet
constant-compilation-method:none
description:a snippet
documentation-reference:kind_snippet
index-default-value:<i>word 1 of command</i>
specification-text:A fragment of the player's most recent typed command, taking in a run of consecu
... tive words.

+TABLE_TY:
apply-macro:#BASE-KIND
singular:table name
plural:table names
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value:TheEmptyTable
loop-domain-schema:for (*2=0, *1=TableOfTables-->*2: *1: *2++, *1=TableOfTables-->*2)
i6-printing-routine:PrintTableName
constant-compilation-method:special
description:the name of a table
documentation-reference:kind_tablename
index-priority:6
index-default-value:<i>a table with no rows or columns</i>
indexed-grey-if-empty:yes

```

specification-text:Like tables of information in a book or newspaper, tables in Inform hold values ... which have been organised into rows and columns. A table name is just a single value, identifying which table is meant - say, 'Table of US Presidents' might be a table name value.

+EQUATION_TY:

apply-macro:#BASE-KIND

singular:equation name

plural:equation names

instance-of:WORD_VALUE_TY

default-value:0

i6-printing-routine:DA_Number

constant-compilation-method:special

description:the name of an equation

index-priority:6

index-default-value:<i>an equation doing nothing</i>

indexed-grey-if-empty:yes

specification-text:Like formulae in a textbook or a scientific paper, equations in Inform are written out in displayed form and given names.

+RULEBOOK_OUTCOME_TY:

apply-macro:#BASE-KIND

singular:rulebook outcome

plural:rulebook outcomes

instance-of:WORD_VALUE_TY

instance-of:SAYABLE_VALUE_TY

i6-printing-routine:RulebookOutcomePrintingRule

constant-compilation-method:special

description:the name of a rulebook outcome

index-priority:0

+UNDERSTANDING_TY:

apply-macro:#BASE-KIND

singular:topic

plural:topics

instance-of:WORD_VALUE_TY

cast:TEXT_TY

default-value:DefaultTopic

i6-printing-routine-actions:DA_Topic

constant-compilation-method:special

description:a topic

index-priority:0

+INTERMEDIATE_TY:

apply-macro:#BASE-KIND

instance-of:WORD_VALUE_TY

instance-of:ARITHMETIC_VALUE_TY

i6-printing-routine:DA_Number

i6-printing-routine-actions:DA_Number

description:the intermediate result of some complex calculation

index-priority:0

! Represents intermediate results of arithmetic in dimensional formulae

+NIL_TY:

```

apply-macro:#BASE-KIND
instance-of:WORD_VALUE_TY
description:nothing
index-priority:0
! Represents a lack of arguments, or of results

+KIND_VARIABLE_TY:
apply-macro:#KIND-VARIABLE
description:a variable denoting a kind

```

§5. Group 3. Constructors.

```

+MAP_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:phrase k -> 1
plural:phrases k -> 1
constructor-arity:2
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
i6-printing-routine:SayPhraseName
constant-compilation-method:special
index-default-value:<i>always the default value of L</i>

+TUPLE_ENTRY_TY:
apply-macro:#KIND-CONSTRUCTOR
constructor-arity:2
instance-of:WORD_VALUE_TY
index-priority:0
! Represents an entry in a multiple

+RELATION_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:relation | relation of k to l | relation of k
plural:relations | relations of k to l | relations of k
constructor-arity:2
instance-of:POINTER_VALUE_TY
instance-of:SAYABLE_VALUE_TY
has-native-constants:no
multiple-block:yes
heap-size-estimate:8
can-exchange:yes
constant-compilation-method:special
distinguisher:RELATION_TY_Distinguish
i6-printing-routine:RELATION_TY_Say
description:a relation of K to L
index-default-value:<i>a relation never holding</i>

+RULE_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:rule | k based rule | rule producing l | k based rule producing l
plural:rules | k based rules | rules producing l | k based rules producing l
constructor-arity:2

```

```

instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
cast:RULEBOOK_TY
default-value:LITTLE_USED_DO_NOTHING_R
i6-printing-routine:RulePrintingRule
constant-compilation-method:special
description:the name of a rule
documentation-reference:kind_rule
index-default-value:the little-used do nothing rule
indexed-grey-if-empty:yes
specification-text:One of many, many rules which determine what happens during play. Rules can be t
... riggered by scenes beginning or ending, by certain actions, at certain times, or in the co
... urse of carrying out certain activities.

+RULEBOOK_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:rulebook | k based rulebook | rulebook producing 1 | k based rulebook producing 1
plural:rulebooks | k based rulebooks | rulebooks producing 1 | k based rulebooks producing 1
constructor-arity:2
instance-of:WORD_VALUE_TY
instance-of:SAYABLE_VALUE_TY
default-value: 0
constant-compilation-method:special
i6-printing-routine:RulePrintingRule
description:the name of a rulebook
documentation-reference:kind_rulebook
index-default-value:the action-processing rules
specification-text:A list of rules to follow, in sequence, to get something done. A rulebook is lik
... e a ring-binder, with the individual rules as sheets of paper. Inform normally sorts these
... into their 'natural' order, with the most specific rules first, but it's easy to shuffle
... the pages if you need to. When some task is carried out during play, Inform is normally wo
... rking through a rulebook, turning the pages one by one.

+ACTIVITY_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:activity | activity on k
plural:activities | activities on k
constructor-arity:1
instance-of:WORD_VALUE_TY
default-value:PRINTING_THE_NAME_ACT
constant-compilation-method:special
description:an activity
documentation-reference:kind_activity
index-default-value:printing the name
specification-text:An activity is something which Inform does as part of the mechanics of play - fo
... r instance, printing the name of an object, which Inform often has to do. An activity can
... happen by itself ('printing the banner text', for instance) or can be applied to an object
... ('printing the name of something', say).

+LIST_OF_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:list of k
plural:lists of k

```

```

constructor-arity:1
instance-of:POINTER_VALUE_TY
instance-of:SAYABLE_VALUE_TY
has-native-constants:no
multiple-block:yes
heap-size-estimate:256
can-exchange:yes

constant-compilation-method:special
distinguisher:LIST_OF_TY_Distinguish
i6-printing-routine:LIST_OF_TY_Say
description:a list of
documentation-reference:kind_listof
index-default-value:{ }
specification-text:A flexible-length list of values, where all of the items have to have the same k
... ind of value as each other - for instance, a list of rooms, or a list of lists of numbers.
... The empty list, with no items yet, is written { }, and a list with items in is written wi
... th commas dividing them - say {2, 5, 9}.

+DESCRIPTION_OF_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:description of k
plural:descriptions of k
constructor-arity:1
instance-of:WORD_VALUE_TY
default-value:Prop_Falsity
constant-compilation-method:special
description:a description of
documentation-reference:kind_description
index-default-value:<i>matching nothing</i>
specification-text:A description of a set of values, where all of the items have to have the same k
... ind of value as each other - for instance, 'even numbers' or 'open doors which are in ligh
... ted rooms'.

+PROPERTY_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:property | k valued property
plural:properties | k valued properties
constructor-arity:1
instance-of:WORD_VALUE_TY
constant-compilation-method:special
i6-printing-routine:PROPERTY_TY_Say
description:a property of something

+TABLE_COLUMN_TY:
apply-macro:#KIND-CONSTRUCTOR
singular:table column | k valued table column
plural:table columns | k valued table columns
constructor-arity:1
instance-of:WORD_VALUE_TY
constant-compilation-method:special
description:the name of a column

+COMBINATION_TY:

```

```

apply-macro:#KIND-CONSTRUCTOR
singular:combination | combination k | combination k and l
plural:combinations | combinations k | combinations k and l
constructor-arity:2

instance-of:POINTER_VALUE_TY
instance-of:COMBINED_VALUE_TY
instance-of:SAYABLE_VALUE_TY
has-native-constants:no
multiple-block:yes
heap-size-estimate:256
can-exchange:yes

constant-compilation-method:special
distinguisher:COMBINATION_TY_Distinguish
i6-printing-routine:COMBINATION_TY_Say
description:a list of
documentation-reference:kind_listof
index-priority:0
index-default-value:{ }
specification-text:A way to combine a fixed small number of values, of possibly different kinds, to
...  gether.

```

§6. Groups 4 and 5. Enumerations and units.

```

! New kinds of value are initially given these settings:
#NEW:
apply-macro:#BASE-KIND
instance-of:WORD_VALUE_TY
is-incompletely-defined:yes
named-values-created-with-assertions:yes
can-coincide-with-property:yes
defined-in-source-text:yes
description:a designed type

! When the source text specifies either a named constant value, or a literal
! pattern, it decides whether the new type is to be an enumeration or a unit,
! at which point one of the following macros is applied to the type:
#ENUMERATION:
instance-of:ENUMERATED_VALUE_TY
instance-of:SAYABLE_VALUE_TY
is-incompletely-defined:no
named-values-created-with-assertions:yes
default-value:1
index-default-value:<first-constant>
index-priority:5
has-i6-GPR:yes
uses-signed-comparisons:yes
can-exchange:yes
description:a designed type
constant-compilation-method:quantitative
apply-template:*UNDERSTOOD-VARIABLE
#UNIT:
instance-of:ARITHMETIC_VALUE_TY

```

```
instance-of:SAYABLE_VALUE_TY
is-incompletely-defined:no
uses-signed-comparisons:yes
can-exchange:yes
defined-in-source-text:yes
named-values-created-with-assertions:no
default-value:0
index-default-value:<0-in-literal-pattern>
index-priority:2
has-i6-GPR:yes
constant-compilation-method:literal
apply-template:*UNDERSTOOD-VARIABLE
```

§7. Tail.

```
{-endlines}
{-callv:Types::IDs::batch_of_new_types_done}
```