

all deferred features of visitor class
should be defined at simplify,
analysis and pretty_printer
respectively

+
SIMPLIFY

+
ANALYSIS

+
PRETTY_PRINTER

VISITOR*

```
feature -- constant
  visit_integer_constant(e: INTEGER_CONSTANT)*
  visit_boolean_constant(e: BOOLEAN_CONSTANT*)

feature -- binary ops
  visit_plus(e: PLUS)*
  visit_minus(e: MINUS)*
  visit_times(e: TIMES)*
  visit_quotient(e: QUOTIENT)*
  visit_mod(e: MOD)*
  visit_logic_and(e: LOGIC_AND)*
  visit_logic_or(e: LOGIC_OR)*
  visit_logic_xor(e: LOGIC_XOR)*
  visit_logic_implies(e: LOGIC_IMPLIES)*
  visit_logic_equal(e: LOGIC_EQUAL)*
  visit_gt(e: GT)*
  visit_lt(e: LT)*
  visit_union(e: UNION)*
  visit_intersect(e: INTERSECT)*
  visit_difference(e: DIFFERENCE)*

feature -- unary ops
  visit_negative(e: NEGATIVE)*
  visit_negation(e: NEGATION)*
  visit_sigma(e: SIGMA)*
  visit_product(e: PRODUCT)*
  visit_forall(e: FORALL)*
  visit_exists(e: EXISTS)*
  visit_counting(e: COUNTING)*

feature -- set
  visit_set_enumeration(se: SET_ENUMERATION)*
```

COMPOSITE*

```
feature
  children: LINKED_LIST[EXPRESSION]
  add_expression * (e: EXPRESSION))
  can_add : boolean
```

EXPRESSION*

```
feature
  accept (v: VISITOR)*
```

children[...]

ETF_ADDITION
ETF_ANALYZE
ETF_BOOL_VALUE
ETF_CONJUNCTION
ETF_DIFFERENCE
ETF_DISJUNCTION
ETF_END_OF_ENUMERATION
ETF_EQUALS
ETF_EXCLUSIVE
ETF_EXISTS
ETF_FORALL
ETF_GREATER_THAN
ETF_IMPLICATION
ETF_INTERSECTION
ETF_INT_VALUE
ETF_LESS_THAN
ETF_LOGICAL_NEGATION
ETF_MODULE
ETF_MULTIPLICATION
ETF_NUMERICAL_NEGATION
ETF_PRODUCT
ETF_QUOTIENT
ETF_RESTART
ETF_SIGMA
ETF_SIMPLIFY
ETF_START_OF_SET_ENUMERATION
ETF_SUBTRACTION
ETF_UNION

ETF_COMMAND

ETF_ACCESS

m

ETF_MODEL

```
EFFECTIVE_CONSTANT_CLASS
class --integer
  integer_constant

class --boolean
  boolean_constant
```

BINARY_OPERATION* (DEFERRED CLASS)

```
feature
  left: detachable EXPRESSION
  right: detachable EXPRESSION
  add_expression (e: EXPRESSION)
```

Effective Classes -- binary ops

plus, minus, times, quotient, mod, logic_and,
logic_or, logic_xor, logic_implies, logic_equal, gt,

```
UNARY_OPERATION* (DEFERRED CLASS)
feature
  right: detachable EXPRESSION
  add_expression (e: EXPRESSION)
```

Effective Classes -- unary ops
negative, negation, sigma, product,
forall, exists, counting