# Pre-processing

## Substitution rules (17)

|  |  |  |
| --- | --- | --- |
| Type | Description | Regular expression |
| Specific values (2) | 0.0, 0.1f, etc. | \W(-)?[0-9]+(,[0-9]+)\*((\.[0-9]+)?[a-z]\*)\W |
| Member value of objects, e.g., Location.x | \W(^(java\.|javax\.|org\.))?([A-Za-z\_]+\w+\.)+[a-z\_]+[a-z0-9\_]\*[^\.A-Za-z0-9\_] |
| Class methods and static members (4) | class methods, e.g., ClassA.func(Param1) | \W[A-Za-z\_]+[A-Za-z\_0-9]\*(\.[A-Za-z\_]+[A-Za-z\_0-9])\*(#[A-Za-z\_]+[A-Za-z\_0-9]\*)?\([^()]\*\)\W |
| Static member, e.g., Desktop.Action#OPEN | \W([A-Za-z\_]+[A-Za-z\_0-9]\*(\.[A-Za-z\_]+[A-Za-z\_0-9])\*)?(#[A-Za-z\_]+[A-Za-z\_0-9]\*)[^A-Za-z0-9\_()] |
| All upper case | \W(\w+\.)\*([A-Z]+\_)\*[A-Z]+\W |
| Class name | \W([A-Za-z\_]+\w+\.)\*[A-Za-z\_]\*[A-Z]+\w+[^\.A-Za-z0-9\_] |
| Expressions (11) | A - B | \W\w+((\s+-)|(-\s+)|(\s+-\s+))\w+\W |
| A + B | \W\w+\s\*\+\s\*\w+\W |
| A \* B | \W\w+\s\*\\*\s\*\w+\W |
| A..B | \W\(?\s\*\w+\s\*\)?\s\*\.\s\*\.\s\*\(?\s\*\w+\s\*\)?\W |
| [A, B] | \W\[\s\*\w+\s\*,\s\*\w+\s\*\]\W |
| [A..B] | \W\[\s\*\w+\s\*(\.\s\*\.\s\*)\s\*\w+\s\*\]\W |
| A <\<= B <\<= C | \W\w+\s\*<=?\s\*\w+\s\*<=?\s\*\w+\W |
| A >\>= B >\>= C | \W\w+\s\*>=?\s\*\w+\s\*>=?\s\*\w+\W |
| From A to B | \W(from\s+)?\w+\s+to\s+\w+\W |
| A != B | \W\w+\s\*!=\s\*\w+\W |
| Enumeration expression | \W (\s\*\w+\s\*)(,\s\*\w+\s\*)+,?\s\*or\s\*\w+\W |

## Division rules of composite statements (12)

|  |  |
| --- | --- |
| Type | Rule |
| FRAG statements (2) | FRAG -> SBAR |
| FRAG –> IN + NP |
| SBAR statements (2) | SBAR –> IN(if) + S |
| SBAR –> SBAR + CC + SBAR |
| S statements (2) | S -> S + CC + S |
| S -> NP + VP |
| VP statements (3) | VP-> VP+CC + VP |
| VP-> VBZ+ADJP/UCP |
| VP-> VBZ + ADJP + ？ |
| NP statements (1) | NP -> NP + CC + NP |
| ADJP statements (1) | ADJP -> ? + CC + ? |
| UCP statements (1) | UCP –> ? + CC + ? |