<SST> -> <assgn\_var> | <fn\_call> | <instof\_st> | <assgn\_arr> | <assgn\_obj> | <assgn\_dict> | <assgn\_enum>

Let A = assgn\_var, B = assgn\_arr, C = assgn\_obj, D = assgn\_dict, E = assgn\_enum, F = fn\_call, G = instncof

SST -> <A>  <TS> ID <OPTION> <A3>

SST -> <B>  <TS> ID <OPTION> <B1>

SST -> <C>  <TS> ID <OPTION > = new ID { < C1>}

SST  <D>  <TS> ID <OPTION> = { <D1> }

SST  <E>  <TS> ID <OPTION> = <A6>

SST  <F>  <TS> ID <OPTION> { <F1> }

SST  <G>  <TS> ID <OPTION> instanceof ID

SST -> <TS> ID <OPTION> <SST2> final finhal

SST2  = <A5>

SST2  COMPASS <A5>

SST2  = <B2>

SST2  = new ID { < C1>}

SST2  = { <D1> }

SST2 = <A6>

SST2  { <F1> }

SST2  instanceof ID

SST2 -> = <SST3> | { <F1> } | instanceof ID | COMPASS <A5>

<SST3>  <A6>

<SST3>  { <D1> }

<SST3>  new ID { < C1>}

<SST3>  <B2>

<SST3>  <A5>

SST -> <TS> ID <OPTION> <SST2> final finhal

SST2  = <SST3> | { <F1> } | instanceof ID | COMPASS <A5> final filhal

<SST3>  <OE>

<SST3> --> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> L01 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> <input\_st> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> {<OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> inc\_dec <TS> ID <option> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> ID <opt> <F2><T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<F> --> <const> | L01 <F> | <input\_st> | {<OE>} | | TS . ID <opt> <F1> | ID <opt> <F2>

<SST3> --> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> L01 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> <input\_st> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> {<OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> ID <opt> <F2><T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3>  { <D1> }

<SST3>  new ID { < C1>}

<SST3>  ID <assgn\_arr\_val>

<SST3> --> { <values>}

<SST3> --> ID <asgn\_var\_val>

Final SST3

<SST3> --> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> L01 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> <input\_st> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> --> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3>  new ID { < C1>}

<SST3> --> { <SST4>

<SST3> --> ID <SST5>

<SST4> --> <OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> --> <values>}

<SST4> --> <D1> }

<SST5> --> <opt> <F2> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> --> <asgn\_var\_val>

<SST5> --> <assgn\_arr\_val>

<SST5> --> <assgn\_op> <assgn\_op\_b>

<SST5> --> = <assgn\_val\_b>

<SST5> --> <opt> <F2><T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> --> = <assgn\_op\_b>

<SST5> --> COMPASS <assgn\_op\_b>

<SST5> --> = <assgn\_val\_b>

<SST5> --> <opt> <F2><T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> --> COMPASS <assgn\_op\_b>

<SST5> --> = <SST6>

<SST6> --> <assgn\_val\_b> | <assgn\_op\_b>

**FINAL SST Large Chunk**

SST -> <TS> ID <OPTION> <SST2>

SST2 -> = <SST3> | { <args\_list> } | instanceof ID | COMPASS <asgn\_op\_b>

<SST3> -> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> L01 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> <input\_st> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> new ID { <arguments>}

<SST3> -> { <SST4>

<SST3> -> ID <SST5>

SST4 me left factoring neche

<SST4> -> <OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> <values>}

<SST4> -> <values\_of\_dic> }

<SST5> -> <opt> <F2><T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> COMPASS <assgn\_op\_b>

<SST5> -> = <SST6>

<SST6> -> <assgn\_val\_b> | <assgn\_op\_b>

<SST4> -> <OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> <value> <arr\_val> <values’> }

<SST4> -> ID : <OE> <dict\_val> }

<SST4> -> }

<SST4> -> <OE> <SST4a>

<SST4> -> <value\_list> <arr\_val> <values’> }

<SST4> -> ID : <OE> <dict\_val> }

<SST4> -> }

<SST4a> -> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4a> -> , <OE> <arr\_val> <values’> }

<SST4a> -> , <value> <values’> }

<SST4a> -> }

<fn-call> → <TS> ID <option> { <args\_list> }

Let F1 = args\_list

<assgn\_var> --> <TS> ID <option> <assgn\_var\_val>

<asgn\_var\_val> --> <assgn\_op> <assgn\_op\_b>

<assgn\_op\_b> --> ID <asgn\_var\_val> | <OE>

<assgn\_op> = | COMPASS

Let TS = TS, OPTION = opt, A3 = assgn\_var\_val, A4 = assgn\_op, A5 = asgn\_op\_b, A6 = OE

<assgn\_arr> --> <TS> ID <option> <assgn\_arr\_val>

<assgn\_arr\_val>  = <assgn\_arr\_val\_b>

<assgn\_arr\_val\_b>  ID <assgn\_arr\_val> | <value\_list>

<value\_list> --> { <values>}

<values>  <value> <arr\_val> <values’>

<values’>  , <value> <values’> | €

<value> --> <OE> | <value\_list>

<arr\_val> --> , <OE> <arr\_val> | €

Let B1 = assgn\_arr\_val, B2 = assgn\_arr\_val\_b,

B3 = value\_list, B4 = values, B5 = value,

B6 = arr\_val, B7 = values’

<Assgn\_obj> --> <TS> ID <option> = new ID { <arguments>}

<arguments> --> <args\_list> | €

<args\_list> --> <OE> <list\_args> | ∈

<list\_args> --> , <OE> <list\_args> | ∈

Let C1 = arguments, C2 = args\_list, C3 = list\_args

<assgn\_dict> --> <TS> ID <option> = { <values\_of\_dic> }

<values\_of\_dic> --> ID : <OE> <dict\_val> | €

<dict\_val> --> , ID : <OE> <dict\_val> | €

Let D1 = values\_of\_dic, D2 = dict\_val

<assgn\_enum> --> <TS> ID <option> = <OE>

<incdec\_st>  inc-dec <TS> ID <option> | <TS> ID <option> inc-dec

<instof\_st>  <TS> ID <option> instanceof ID

**New**

<SST> -> <assgn\_var> | <fn\_call> | <instof\_st> | <assgn\_arr> | <assgn\_obj\_or\_enum> | <assgn\_dict> | <dict\_access>

<SST> -> <TS> ID <opt> <SST2>

<SST2> -> **<assgn\_var\_val>**

<SST2> -> { <args\_list> }

<SST2> -> instanceof ID

<SST2> -> **<assgn\_arr\_val>**

<SST2> -> **= <assgn\_obj\_or\_enum\_val>**

<SST2> -> **= { <values\_of\_dic> }**

<SST2> -> **( ID )**

<SST2> -> **= <assgn\_op\_b>**

<SST2> -> **COMPASS <assgn\_op\_b>**

<SST2> -> { <args\_list> }

<SST2> -> instanceof ID

<SST2> -> **= <assgn\_val\_b>**

<SST2> -> **= <assgn\_obj\_or\_enum\_val>**

<SST2> -> **= { <values\_of\_dic> }**

<SST2> -> **( ID )**

Final SST2

<SST2> -> = <SST3>

<SST2> -> **COMPASS <OE>**

<SST2> -> { <args\_list> }

<SST2> -> instanceof ID

<SST2> -> **( ID )**

<SST3> -> **<OE>**

<SST3> -> **<assgn\_val\_b>**

<SST3> -> **{ <values\_of\_dic> }**

<SST3> -> **<assgn\_obj\_or\_enum\_val>**

<SST3> -> **<OE>**

<SST3> -> **ID <assgn\_val\_b>**

**<SST3> -> <value\_list>**

<SST3> -> **{ <values\_of\_dic> }**

<SST3> -> **<OE>**

<SST3> -> **new ID { <arguments>}**

<SST3> -> **<OE>**

<SST3> -> **ID <assgn\_val\_b>**

**<SST3> -> [ <values> ]**

<SST3> -> **{ <values\_of\_dic> }**

<SST3> -> **new ID { <arguments>}**

<SST3> -> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> LO1 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> {<OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> ID <F2> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> ID <assgn\_val\_b>

<SST3> -> [ <values> ]

<SST3> -> { <values\_of\_dic> }

<SST3> -> new ID { <arguments>}

**Final SST3**

<SST3> -> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> LO1 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> { <SST4>

<SST3> -> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST3> -> ID <SST5>

<SST3> -> [ <values> ]

<SST3> -> new ID { <arguments>}

**Final SST4**

<SST4> -> <const> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> LO1 <F> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> {<OE>} <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> TS . ID <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4> -> ID <SST4a>

<SST4> -> }

**Final SST4a**

<SST4a> -> <F2> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> } <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST4a> -> **: <OE> <dict\_val>** }

<SST5> -> <assgn\_val\_b>

<SST5> -> <F2> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> **ID <assgn\_val\_b>**

<SST5> -> <value\_list>

<SST5> -> <opt> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> ( ID ) <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

**Final SST5**

<SST5> -> **ID <assgn\_val\_b>**

<SST5> -> **[ <SST5a>**

<SST5> -> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> instanceof ID <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> . ID <option> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5> -> {<args\_list>} <SST5b>

<SST5> -> ( ID ) <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

**<SST5a> -> <values> ]**

**<SST5a> ->** <OE> ] <option> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

**<SST5a> -> <value> <arr\_val> <values’> ]**

**<SST5a> ->** <OE> ] <option> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

**Final SST5a**

**<SST5a> -> <OE> <SST5a1>**

**<SST5a> -> <value\_list> <arr\_val> <values’> ]**

<SST5a1> -> **<arr\_val> <values’> ]**

<SST5a1> -> ] <option> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>

<SST5a1> -> **, <OE> <arr\_val> <values’> ]**

<SST5a1> -> **<values’> ]**

<SST5a1> -> ] <option> <F1> <T'> <E'> <RE1'> <RE2'> A<AE'> <OE’>

Again

<SST5a1> -> **, <OE> <arr\_val> <values’> ]**

<SST5a1> -> **, <value> <values’> ]**

<SST5a1> -> **] <SST5a1a>**

<SST5a1> -> **,** <SST5a1b>

<SST5a1> -> **] <SST5a1a>**

<SST5a1b> -> **<OE> <arr\_val> <values’> ]**

<SST5a1b> -> **<value> <values’> ]**

<SST5a1b> -> **<OE>** <**SST5a1b1>**

<SST5a1b> -> **<value\_list> <values’> ]**

**<SST5a1b1> -> , <value> <values’> ]**

**<SST5a1b1> -> ]**

**<SST5a1b1> -> , <OE> <arr\_val> <values’> ]**

**<SST5a1b1> -> <values’> ]**

**Final SST5a1a**

<SST5a1a> -> <option> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> | **€**

**Final SST5b**

<SST5b> -> <option2> <F1> <T'> <E'> <RE1'> <RE2'> <AE'> <OE’> | <T'> <E'> <RE1'> <RE2'> <AE'> <OE’>