**Declaration CFGs**

<const> → Str\_const | Char\_const |Number\_const |Bool\_Const | null (keyword)

**Dec\_var (String or DT 2no cover)**

**Int a = b = c = 4**

**Int a**

< dec\_var> → DT ID <init\_var> <list\_var>

<dec\_var> String ID <init\_var> <list\_var>

<init\_var> → = <init\_var\_b> | €

<init\_var\_b> --> ID <init\_var> | <OE>

<list\_var> → , ID <init\_var> <list\_var> | €

**dec\_obj**

**A a = new A{}**

<dec\_obj> → ID ID <init\_obj> <list\_obj> ;

<init\_obj> → = new ID { <args-list> } <list\_obj> | ∈

<list\_obj> → , ID <init\_obj> <list\_obj> | ∈

<args\_list> <OE> <list\_args> | ∈

<list\_args> , <OE> <list\_args> | ∈

**dec\_arr  
syntax:**

int arr1mul[i][j][k]....[z]..so on =

int arr[i][j] = {{1, 2, 3}, {4, 5, 6}, {7, 8, 9}, {10, 11, 12}}; int arr1[size]={1,2,3} , arr2[4]

int arr2[5] = arr3 = { 1,2 , 3}  
string arr3[6]

<dec\_arr> --> DT ID [ <OE> ] <arr\_size> <init \_arr> <list\_arr>

<dec\_arr> --> String ID[ <OE> ]<arr\_size> <init\_arr> <list\_arr>

<arr\_size> --> [ <OE> ] <arr\_size> | €

<init\_arr> --> = ID <init\_arr> | = <value\_list> | €

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

<values> --> <value> <arr\_val> | <values> , <value>

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

<list\_arr> --> , ID [ <OE> ] <init\_arr> <list\_arr> | €

<arr\_val> --> , <OE> <arr\_val> | €

**dec\_dict**

**syntax**

dict a = { key: value, key:value }

dict a, b, c

dict a = b

dict a, b = { key: value, key: value}, c = {}

CFG

<dec\_dict> Dict ID <init\_dict> <list\_dict>

<init\_dict> = <init\_dict\_b> | €

<init\_dict\_b> --> ID <init\_arr> | { <values\_of\_dic> }

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

<list\_dict> --> , ID <init\_dict> <list\_dict> | €

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

**dec\_enum**

**Syntax**

**Enum definiton**

enum Direction : (

North,

South,

East,

West

)

Example

Direction dir = Exp;

Direction dir, dir2

Direction dir, dir2 = “North”, dir3 = “south”

CFG:-

<dec\_enum> → ID ID <option> <init\_enum> <list\_enum> ;

<init\_enum> → = <OE> | €

<list\_enum> → , ID <init\_enum> <list\_enum > | €