

CFG's	First Set	Follow Set	Selection Set
$\langle \text{DEC} \rangle \rightarrow \text{DT ID}$ $\langle \text{INIT} \rangle \langle \text{LIST} \rangle$	{DT}	{THIS, SUPER, ID, INT, DOUB_CONST, STR_CONST, BOOL_CONST, CHAR_CONST, (, !, INC_DEC, ;}	First set
$\langle \text{LIST} \rangle \rightarrow ;$	{ ; }	{WHILE , IF , DO , FOR, RETURN , THROW, TRY , SWITCH , BREAK , CONTINUE , THIS , SUPER , ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , } , ; , ELSE }	First set
$\langle \text{LIST} \rangle \rightarrow , \text{ID} \langle \text{INIT} \rangle \langle \text{LIST} \rangle$	{ , }		First set
$\langle \text{INIT} \rangle \rightarrow = \langle \text{OE} \rangle$	{ = }	{ ; , , }	First set
$\langle \text{INIT} \rangle \rightarrow \text{E}$	{ E }		Follow Set
$\langle \text{WHILE} \rangle \rightarrow \text{WHILE} ( \langle \text{OE} \rangle ) \langle \text{BODY} \rangle$	{ WHILE }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
$\langle \text{BODY} \rangle \rightarrow ;$	{ ; }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
$\langle \text{BODY} \rangle \rightarrow \langle \text{SST} \rangle$	{WHILE, IF, DO, RETURN, FOR ,TRY, THROW, SWITCH, BREAK, CONTINUE, ARRAYLIST, FINAL, DT, THIS, SUPER, ID}		First Set
$\langle \text{BODY} \rangle \rightarrow \{ \langle \text{MST} \rangle \}$	{ { }		First Set

CFG's	First Set	Follow Set	Selection Set
<MST> → E	{ E }	{ ; , }	Follow Set
<MST> → <SST> <MST>	{ WHILE, IF, DO, RETURN, FOR, TRY, THROW, SWITCH, BREAK, CONTINUE, ARRAYLIST, FINAL, DT, THIS, SUPER, ID }		First Set
<IF_ELSE> → IF ( <OE> ) <BODY> <OELSE>	{ IF }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<OELSE> → ELSE <BODY>	{ ELSE }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<DO_WHILE> → DO { <MST> } WHILE ( <OE> ) ;	{ DO }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<FOR> → FOR ( <C1> <C2> ; <C3> ) <BODY>	{ FOR }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<C1> → <DEC>	{ DT }	{ THIS, SUPER, ID, INT, DOUB_CONST, STR_CONST, BOOL_CONST, CHAR_CONST, ( , ! , INC_DEC, ; }	First Set
<C1> → <ASGN_ST> ;	{ THIS, SUPER, ID }		First Set

CFG's	First Set	Follow Set	Selection Set
<C1> → ;	{;}	{THIS, SUPER, ID, INT, DOUB_CONST, STR_CONST, BOOL_CONST, CHAR_CONST, (, !, INC_DEC, ;}	First Set
<C2> → E	{ E }	{ ; }	Follow Set
<C2> → <OE>	{THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST, (, !, INC_DEC }		First Set
<C3> → <INC_DEC_ST>;	{INC_DEC, THIS, SUPER, ID}	{ ) }	First Set
<C3> → ;	{ ; }		First Set
<ASGN_ST> → <TH> ID <X> <ASGN_OP> <OE>	{THIS, SUPER, ID}	{ ; }	First Set
<TH> → THIS .	{THIS}	<TH> → {ID}	First Set
<TH> → SUPER .	{SUPER}		First Set
<TH> → E	{ E }		Follow Set

CFG's	First Set	Follow Set	Selection Set
<ASGN_OP> → =	{ = }	{THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST, ( , !, INC_DEC }	First Set
<ASGN_OP> → COMP_ASGN	{ COMP_ASGN }		First Set
<INC_DEC_ST> → INC_DEC <TH> ID <X>	{INC_DEC}	{ ; }	First Set
<INC_DEC_ST> → <TH> ID <X> INC_DEC	{THIS, SUPER, ID}		First Set
<X> → ( <PL> ) <X1>	{ ( }	{ MPM , PM , RO , AO , OR , , , ) , } , ] , = , COMP_ASGN , ; , INC_DEC }	First Set
<X> → . <X3>	{ . }		First Set
<X> → [ <OE> ] <X2>	{ [ }		First Set
<X> → E	{ E }		Follow Set
<X1> → . <X3>	{ . }		First Set
<X1> → [ <OE> ] <X2>	{ [ }	{ MPM , PM , RO , AO , OR , , , ) , } , ] , = , COMP_ASGN , ; , INC_DEC }	First Set

CFG's	First Set	Follow Set	Selection Set
<X1> → ID <X>	{ ID }	{ MPM , PM , RO , AO , OR , , , ) , } , ] , = , COMP_ASGN , ; , INC_DEC }	First Set
<X2> → . <X3>	{ . }	{ MPM , PM , RO , AO , OR , , , ) , } , ] , = , COMP_ASGN , ; , INC_DEC }	First Set
<X2> → [ <OE> ] <X2>	{ [ }		First Set
<X2> → E	{ E }		Follow Set
<X3> → ID<X>	{ ID }	{ MPM , PM , RO , AO , OR , , , ) , } , ] , = , COMP_ASGN , ; , INC_DEC }	First Set
<X3> → GET(<OE>) <X2>	{ GET }		First Set
<PL> → <OE> <PL2>	{THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST,( , !, INC_DEC }	{ ) , } }	First Set
<PL> → E	{ E }		Follow Set
<PL2> → E	{ E }	{ ) , } }	Follow Set
<PL2> → , <OE> <PL2>	{ , }		First Set

CFG's	First Set	Follow Set	Selection Set
$\langle OE \rangle \rightarrow \langle AE \rangle \langle OE' \rangle$	$\text{FIRST}(\langle OE \rangle) = \{\text{THIS}, \text{SUPER}, \text{ID}, \text{INT}, \text{STR\_CONST}, \text{DOUB\_CONST}, \text{CHAR\_CONST}, \text{BOOL\_CONST}, (, !, \text{INC\_DEC}\}$	$\{, , ] , ; , ) , \}$	First Set
$\langle OE' \rangle \rightarrow \text{OR } \langle AE \rangle \langle OE' \rangle$	$\{\text{OR}\}$	$\{, , ) , \} , , ; \}$	First Set
$\langle OE' \rangle \rightarrow E$	$\{E\}$		Follow Set
$\langle AE \rangle \rightarrow \langle RE \rangle \langle AE' \rangle$	$\{\text{THIS}, \text{SUPER}, \text{ID}, \text{INT}, \text{STR\_CONST}, \text{DOUB\_CONST}, \text{CHAR\_CONST}, \text{BOOL\_CONST}, (, !, \text{INC\_DEC}\}$	$\{\text{OR} , , , ) , \} , , ; \}$	First Set
$\langle AE' \rangle \rightarrow \text{AO } \langle RE \rangle \langle AE' \rangle$	$\{\text{AO}\}$	$\{\text{OR} , , , ) , \} , , ; \}$	First Set
$\langle AE' \rangle \rightarrow E$	$\{E\}$		Follow Set
$\langle RE \rangle \rightarrow \langle E \rangle \langle RE' \rangle$	$\{\text{THIS}, \text{SUPER}, \text{ID}, \text{INT}, \text{STR\_CONST}, \text{DOUB\_CONST}, \text{CHAR\_CONST}, \text{BOOL\_CONST}, (, !, \text{INC\_DEC}\}$	$\{\text{AO} , \text{OR} , , , ) , \} , , ; \}$	First Set
$\langle RE' \rangle \rightarrow \text{RO } \langle E \rangle \langle RE' \rangle$	$\{\text{RO}\}$	$\{\text{AO} , \text{OR} , , , ) , \} , , ; \}$	First Set
$\langle RE' \rangle \rightarrow E$	$\{E\}$		Follow Set
$\langle E \rangle \rightarrow \langle T \rangle \langle E' \rangle$	$\{\text{THIS}, \text{SUPER}, \text{ID}, \text{INT}, \text{STR\_CONST}, \text{DOUB\_CONST}, \text{CHAR\_CONST}, \text{BOOL\_CONST}, (, !, \text{INC\_DEC}\}$	$\{\text{RO} , \text{AO} , \text{OR} , , , ) , \} , , ; \}$	First Set

CFG's	First Set	Follow Set	Selection Set
$\langle E' \rangle \rightarrow PM \langle T \rangle \langle E' \rangle$	{ PM }	{ RO , AO , OR , , , , , , , , ; }	First Set
$\langle E' \rangle \rightarrow E$	{ E }		Follow Set
$\langle T \rangle \rightarrow \langle F \rangle \langle T' \rangle$	{ THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST, ( , !, INC_DEC }	{ PM , RO , AO , OR , , , , , , , , ; }	First Set
$\langle T' \rangle \rightarrow MDM \langle F \rangle \langle T' \rangle$	{ MDM }	{ PM , RO , AO , OR , , , , , , , , ; }	First Set
$\langle T' \rangle \rightarrow E$	{ E }		Follow Set
$\langle F \rangle \rightarrow \langle TH \rangle ID \langle F1 \rangle$	{ THIS, SUPER, ID }	{ MPM , PM , RO , AO , OR , , , , , , , , ; }	First Set
$\langle F \rangle \rightarrow \langle CONST \rangle$	{ INT_CONST, STR_CONST, DOUB_CONST, BOOL_CONST_CONST, CHAR_CONST_CONST }		First Set
$\langle F \rangle \rightarrow ( \langle OE \rangle )$	{ ( }		First Set
$\langle F \rangle \rightarrow ! \langle F \rangle$	{ ! }		First Set
$\langle F \rangle \rightarrow INC\_DEC \langle TH \rangle ID \langle X \rangle$	{ INC_DEC }		First Set

CFG's	First Set	Follow Set	Selection Set
$\langle F1 \rangle \rightarrow . \langle F1' \rangle$	{ . }	{ MPM , PM , RO , AO , OR ,,, ), }, ], ; }	First Set
$\langle F1 \rangle \rightarrow [ \langle OE \rangle ] \langle Z1 \rangle$	{ [ }		First Set
$\langle F1 \rangle \rightarrow INC\_DEC$	{ INC_DEC }		First Set
$\langle F1 \rangle \rightarrow ( \langle PL \rangle ) \langle F2 \rangle$	{ ( }		First Set
$\langle F1 \rangle \rightarrow E$	{ E }		Follow Set
$\langle F1' \rangle \rightarrow GET ( \langle OE \rangle ) \langle Z1 \rangle$	{ GET }	{ MPM , PM , RO , AO , OR ,,, ), }, ], ; }	First Set
$\langle F1' \rangle \rightarrow ID \langle F1 \rangle$	{ ID }		First Set
$\langle F2 \rangle \rightarrow E$	{ E }	{ MPM , PM , RO , AO , OR ,,, ), }, ], ; }	Follow Set
$\langle F2 \rangle \rightarrow \langle Z \rangle$	{ . , [ }		First Set



CFG's	First Set	Follow Set	Selection Set
$\langle Z \rangle \rightarrow .\langle F1' \rangle$	{.}	$FIRST(\langle Z \rangle) = \{ . , [ \}$	First Set
$\langle Z \rangle \rightarrow [ \langle OE \rangle ] \langle Z1 \rangle$	{[}		First Set
$\langle CONST \rangle \rightarrow INT\_CONST$	{ INT_CONST }	$\langle CONST \rangle \rightarrow \{ :, MPM , PM , RO , AO , OR , , , ) , , , , ; \}$	First Set
$\langle CONST \rangle \rightarrow STR\_CONST$	{ STR_CONST }		First Set
$\langle CONST \rangle \rightarrow DOUB\_CONST$	{ DOUB_CONST }		First Set
$\langle CONST \rangle \rightarrow BOOL\_CONST\_CONST$	{ BOOL_CONST_CONST }		First Set
$\langle CONST \rangle \rightarrow CHAR\_CONST\_CONST$	{ CHAR_CONST_CONST }		First Set
$\langle FUNC\_CALL \rangle \rightarrow \langle TH \rangle ID \langle Y \rangle$	{ THIS, SUPER, ID }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , , } }	First Set
$\langle Y \rangle \rightarrow \langle Y' \rangle ( \langle PL \rangle ) \langle Y1 \rangle$	{. , [ , ( }		First Set
			First Set

CFG's	First Set	Follow Set	Selection Set
$\langle \text{ARRAY} \rangle \rightarrow [ \langle \text{OE} \rangle ]$ $\langle \text{ARRAY} \rangle$	{ [ ] }	{ . , INC_DEC, = , COMP_ASGN, ( }	First Set
$\langle \text{ARRAY} \rangle \rightarrow E$	{ E }		Follow Set
$\langle Y1 \rangle \rightarrow . \langle Y5 \rangle$	{ . }		First Set
$\langle Y1 \rangle \rightarrow . [ \langle \text{OE} \rangle ] \langle \text{ARRAY} \rangle \langle Y2 \rangle$	{ [ ] }		First Set
$\langle Y1 \rangle \rightarrow E$	{ E }		First Set
$\langle Y2 \rangle \rightarrow E$	{ E }		First Set
$\langle Y2 \rangle \rightarrow \langle Y3 \rangle . \text{ID}$	{ . }		First Set
$\langle Y3 \rangle \rightarrow E$	{ E }		First Set
$\langle Y3 \rangle \rightarrow ( \langle \text{PL} \rangle ) \langle Y1 \rangle$	{ ( ) }		First Set

CFG's	First Set	Follow Set	Selection Set
<Y4> → ID <Y'>	{ ID }		First Set
<Y4> → GET (<OE>) .ID	{ GET }		First Set
<Y5> → GET (<OE>) <Y2>	{ GET }		First Set
<Y5> → ID <Y3>	{ ID }		First Set
<ABS_FINAL>→ ABSTRACT	{ ABSTRACT }	{ CLASS , DT , ID, ARRAYLIST }	First Set
<ABS_FINAL>→ FINAL	{ FINAL }		First Set
<ABS_FINAL>→ E	{ E }		Follow Set
<FINAL> → FINAL	{ FINAL }	{ DT }	First Set
<FINAL> → E	{ E }		Follow Set

CFG's	First Set	Follow Set	Selection Set
<S> → <DEFS> PUBLIC CLASS ID <INHT> <THROWS> { PUBLIC STATIC VOID MAIN ( ) { <MST> } <C_BODY> } <DEFS>	{ABSTRACT, FINAL, CLASS, PUBLIC}	<S> → {\$}	First Set
<DEFS>→ E	{ E }	{PUBLIC}	Follow Set
<DEFS>→ <CLASS_DEFS> <DEFS>	{ABSTRACT, FINAL, CLASS}		First Set
<CLASS_DEFS>→ <ABS_FINAL> CLASS ID < INHT > <THROWS> {<C_BODY>}	ABSTRACT, FINAL, CLASS}	{ ABSTRACT , FINAL , CLASS , PUBLIC , \$ }	First Set
<ACSS_MODF> → PUBLIC	{ PUBLIC }	{ STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST }	First Set
<ACSS_MODF> → PRIVATE	{ PRIVATE }		First Set
<ACSS_MODF> → E	{ E }		Follow Set
<STATIC>→ E	{ E }	{ ABSTRACT , FINAL , DT , ID , ARRAYLIST }	Follow Set
<STATIC>→ STATIC	{ STATIC }		First Set

CFG's	First Set	Follow Set	Selection Set
<IINHT> → EXTENDS ID	{ EXTENDS }	{ THROW, { }	First Set
<IINHT> → E	{ E }		Follow Set
<C_BODY> → <ACCESS_MODIFIER> <STATIC> <ABS_FINAL> <C_BODY_2> <C_BODY>	{ PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL , DT, ID, ARRAYLIST }	{ }	First Set
<C_BODY> →   E	{ E }		Follow Set
<C_BODY_2> → ID <C_BODY_7>	{ ID }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , }	First Set
<C_BODY_2> → DT <C_BODY_3>	{ DT }		First Set
<C_BODY_2> → ARRAY_LIST <<A1>> ID <C_BODY_5>	{ ARRAYLIST }		First Set
<C_BODY_7> → .ADD (<CL1>);	{ . }		First Set
<C_BODY_7> → ID <C_BODY_4>	{ ID }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , }	First Set

CFG's	First Set	Follow Set	Selection Set
<b>&lt;C_BODY_3&gt;</b> → ID <C_BODY_6>	{ ID }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , } }	First Set
<b>&lt;C_BODY_3&gt;</b> → [] <ARR_DEC'> ID ( <ARGS> ) <THROWS> { <MST> }	{ [] }		First Set
<b>&lt;C_BODY_6&gt;</b> → [] <ARR_DEC'> <VAL>;	{ [] }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , } }	First Set
<b>&lt;C_BODY_6&gt;</b> → ( <ARGS> ) <THROWS> { <MST> }	{ = }		First Set
<b>&lt;C_BODY_6&gt;</b> → <INIT> <LIST>	{ = , ; , , }		First Set
<b>&lt;C_BODY_4&gt;</b> → = NEW ID (<PL>);	{ = }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , } }	First Set
<b>&lt;C_BODY_4&gt;</b> → (<ARGS>) <THROWS> { <MST> }	{ ( }		First Set
<b>&lt;C_BODY_5&gt;</b> → = NEW ARRAY_LIST <<A1>> ( );	{ = }	{ ID , PUBLIC , PRIVATE , STATIC , ABSTRACT , FINAL , DT , ID , ARRAYLIST , } }	First Set
<b>&lt;C_BODY_5&gt;</b> → ( <ARGS> ) <THROWS> { <MST> }	{ ( }		First Set

CFG's	First Set	Follow Set	Selection Set
<CONSTRUCTOR>→ <ACSS_MODF> ID ( <ARGS> ) { <MST> }	{PUBLIC, PRIVATE, ID}	{ ID, PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL, DT, ID, ARRAYLIST, }	First Set
<ARGS> → E	{ E }	{ ) }	Follow Set
<ARGS> → DT <ARGS2>	{ DT }		First Set
<ARGS> → ID ID	{ ID }		First Set
<ARGS2>→ ID <ARGS1>	{ ID }	{ ) }	First Set
<ARGS2>→ [ ] <ARR_DEC'> ID <ARGS1>	{ [ }		First Set
<ARGS1>→ , <ARGS3>	{ , }	{ ) }	First Set
<ARGS1>→ E	{ E }		Follow Set
<ARGS3>→ ID <ARGS4>	{ ID }	{ ) }	First Set
<ARGS3>→ [ ] <ARR_DEC'> ID <ARGS1>	{ [ }		First Set

CFG's	First Set	Follow Set	Selection Set
<ARGS4>→ <ARGS1>	{, , E }	{ ) }	{, , ) }
<ARGS4>→ ID <ARGS1>	{ ID }		First Set
<DEC1>→ <ACSS_MODF> <STATIC> <FINAL> DT ID <INIT> <LIST>	{PRIVATE, PUBLIC, STATIC, FINAL, DT}	{ PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL , DT, ID, ARRAYLIST , }	First Set
<FUNC_DEF> → <ACSS_MODF> <STATIC> <ABS_FINAL> <RETURN_TYPE> ID ( <ARGS> ) <THROWS> { <MST> }	{PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL, DT, ARRAYLIST, ID}	{ PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL , DT, ID, ARRAYLIST , }	First Set
<OBJ_DEC> → ID ID = NEW ID ( <PL> ) ;	{ ID }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<OBJ_DEC_1>→ <ACSS-MODF> <STATIC> <FINAL> ID ID = NEW ID ( <PL> ) ;	{PUBLIC, PRIVATE, STATIC, FINAL, ID}	{ ID, PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL, DT, ID, ARRAYLIST, }	First Set
<DATA_TYPE> → DT	{DT}		First Set



CFG's	First Set	Follow Set	Selection Set
<RETURN_TYPE>→ DT <RT'>	{ DT }	{ ID }	First Set
<RETURN_TYPE>→ ARRAYLIST <<A1>>	{ ARRAYLIST }		First Set
<RETURN_TYPE>→ ID	{ ID }		First Set
<RT'>           → E	{ E }	{ ID }	Follow Set
<RT'>           → [ ] <ARRAY_DEC'>	{ [ ] }		First Set
<ARR_DEC> → <FINAL> DT ID [ ] <ARR_DEC'> <VAL> ;	{ FINAL, DT }		First Set
<ARR_DEC'> → [ ] <ARR_DEC'>	{ [ ] }	{ = , ID , > }	First Set
<ARR_DEC'> → E	{ E }		Follow Set
<VAL>           → = <AD>	{ = }	{ ; }	First Set

CFG's	First Set	Follow Set	Selection Set
<AD> → NEW DT [ <OE> ] <AD1>	{ NEW }	{ ; }	First Set
<AD> → { <AD2> } <AD3>	{ {} }		First Set
<AD1> → [ <OE> ] <AD1>	{ [] }	{ ; }	First Set
<AD1> → E	{ E }		Follow Set
<AD2> → E	{ E }	{ }	Follow Set
<AD2> → <PL>	{THIS, SUPER, ID, INT, DOUB_CONST, STR_CONST, BOOL_CONST, CHAR_CONST, ( , ! , INC_DEC, E}		{THIS, SUPER, ID, INT, DOUB_CONST, STR_CONST, BOOL_CONST, CHAR_CONST, ( , ! , INC_DEC, }
<AD2> → { <PL> } <AD3>	{ {} }		First Set
<AD3> → , <AD4>	{ , }	{ ; , }	First Set
<AD3> → E	{ E }		Follow Set

CFG's	First Set	Follow Set	Selection Set
$\langle AD4 \rangle \rightarrow \{ \langle PL \rangle \}$ $\langle AD3 \rangle$	{ }	{ }	First Set
$\langle AD4 \rangle \rightarrow \langle PL \rangle$ $\langle AD3 \rangle$	{ THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST, ( , !, INC_DEC, , , E }		{ THIS, SUPER, ID, INT, STR_CONST, DOUB_CONST, CHAR_CONST, BOOL_CONST , ( , !, INC_DEC, , , }
$\langle ARR\_DEC\_1 \rangle \rightarrow$ $\langle ACSS\_MODF \rangle$ $\langle STATIC \rangle \langle FINAL \rangle DT$ $ID [ ] \langle ARR\_DEC' \rangle$ $\langle VAL \rangle ;$	{ PRIVATE, PUBLIC, STATIC, FINAL, DT }		First Set
$\langle TRY\_CATCH \rangle \rightarrow TRY$ $\{ \langle MST \rangle \} CATCH ($ $ID ID ) \{ \langle MST \rangle \}$	{ TRY }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
$\langle THROW \rangle \rightarrow$ $THROW NEW ID ($ $\langle PL \rangle )$	{ THROW }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
$\langle THROWS \rangle \rightarrow$ $THROWS ID$	{ THROWS }	{ }	First Set
$\langle THROWS \rangle \rightarrow E$	{ E }		Follow Set
$\langle SWITCH\_ST \rangle \rightarrow$ $SWITCH ( \langle OE \rangle ) \{$ $\langle CASE \rangle \}$	{ SWITCH }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set

CFG's	First Set	Follow Set	Selection Set
<CASE> → CASE <CONST> : <MST> ; <CASE>   DEFAULT : <MST>	{CASE }	<CASE> → {}	First Set
<CASE> → DEFAULT : <MST>	{ DEFAULT }		First Set
<RETURN> → RETURN <RETURN'>	{RETURN}	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<RETURN'> → ;	FIRST(<RETURN'>) = { ; , THIS , SUPER , ID , INT , DOUB_CONST , STR_CONST , BOOL_CONST , CHAR_CONST , ( , ! , INC_DEC }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<RETURN'> → <OE> ;	{ THIS , SUPER , ID , INT , STR_CONST , DOUB_CONST , CHAR_CONST , BOOL_CONST , ( , ! , INC_DEC }		First Set
<BREAK> → BREAK ;	{ CONTINUE }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<CONTINUE> → CONTINUE ;	{ BREAK }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set

$\langle \text{ARRAY\_LIST} \rangle \rightarrow$ $\text{ARRAY\_LIST } \langle \langle A1 \rangle \rangle \text{ ID}$ $= \text{ NEW ARRAYLIST}$ $\langle \langle A1 \rangle \rangle ( ) ;$	{ ARRAYLIST }	{ WHILE , IF , DO , FOR , RETURN , TRY , THROW , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
CFG's	First Set	Follow Set	Selection Set
$\langle A1 \rangle \rightarrow \text{DT } \langle A2 \rangle$	{ DT }	{ > }	First Set
$\langle A1 \rangle \rightarrow \text{ID}$	{ ID }		First Set
$\langle A1 \rangle \rightarrow$ $\text{ARRAYLIST } \langle \langle A1 \rangle \rangle$	{ ARRAYLIST }		First Set
$\langle A2 \rangle \rightarrow \text{E}$	{ E }	{ > }	Follow Set
$\langle A2 \rangle \rightarrow [ ]$ $\langle \text{ARRAY\_DEC}' \rangle$	{ [ ] }		First Set
$\langle \text{ARRAY\_LIST1} \rangle \rightarrow$ $\langle \text{ACSS\_MODF} \rangle$ $\langle \text{ABS\_FINAL} \rangle$ $\text{ARRAYLIST } \langle \langle A1 \rangle \rangle \text{ ID}$ $= \text{ NEW ARRAYLIST}$ $\langle \langle A1 \rangle \rangle ( ) ;$	{ PUBLIC, PRIVATE, ABSTRACT, FINAL, ARRAYLIST }	{ PUBLIC, PRIVATE, STATIC, ABSTRACT, FINAL , DT, ID, ARRAYLIST , } }	First Set
$\langle \text{CREATE\_LIST} \rangle \rightarrow \text{ID .}$ $\text{ADD } ( \langle \text{CL1} \rangle )$	{ ID }	{ ; }	First Set
$\langle \text{CL1} \rangle \rightarrow \langle \text{OE} \rangle$	{ THIS, SUPER, ID, INT, DOUB_CONST, CHAR_CONST, STR_CONST, BOOL_CONST, ( , ! , INC_DEC }	{ ) }	First Set
$\langle \text{CL1} \rangle \rightarrow \text{NEW ID}$ $( \langle \text{PL} \rangle )$	{ NEW }		First Set
$\langle \text{GET\_LIST} \rangle \rightarrow \text{ID .}$ $\text{GET } ( \langle \text{OE} \rangle )$	{ ID }		First Set

CFG's	First Set	Follow Set	Selection Set
<SST> → <WHILE>	{ WHILE }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , } }	First Set
<SST> → <FOR>	{ FOR }		First Set
<SST> → <IF_ELSE>	{ IF }		First Set
<SST> → <DO_WHILE>	{ DO }		First Set
<SST> → <RETURN>	{ RETURN }		First Set
<SST> → <TRY_CATCH>	{ TRY }		First Set
<SST> → <THROW>	{ THROW }		First Set
<SST> → <SWITCH_ST>	{ SWITCH }		First Set
<SST> → <BREAK>	{ BREAK }		First Set
<SST> → <CONTINUE>	{ CONTINUE }		First Set

CFG's	First Set	Follow Set	Selection Set
<b>&lt;SST&gt;</b> → <ARRAY_LIST>	{ ARRAYLIST }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST&gt;</b> → <FINAL> DT ID <SST1>	{ FINAL, DT }		First Set
<b>&lt;SST&gt;</b> → <TH> ID <SST2>	{ THIS, SUPER, ID }		First Set
<b>&lt;SST1&gt;</b> → [ ] <ARRAY_DEC'> <VAL>;	{ [ }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST1&gt;</b> → <INIT> <LIST>	{ = , ; , , }		First Set
<b>&lt;SST2&gt;</b> → INC_DEC ;	{ INC_DEC }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST2&gt;</b> → . <SST7>	{ . }		First Set
<b>&lt;SST2&gt;</b> → ID = NEW ID (<PL>;	{ ID }		First Set
<b>&lt;SST2&gt;</b> → <ASGN_OP> <OE>;	{ = , COMP_ASGN }		First Set
<b>&lt;SST2&gt;</b> → <SST3>	{ [ , ) }		First Set

CFG's	First Set	Follow Set	Selection Set
<SST3> → [<OE>] <ARRAY> <SST6>	{[]}	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<SST3> → (<PL>) <SST4>	{() }		First Set
<SST7> → ADD (<CL1>);	{ADD}	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<SST7> → <SST3'>	{ID, GET}		First Set
<SST3'> → ID <SST5>	{ ID }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<SST3'> → GET ( <OE> ) <SST6>	{ GET }		First Set
<SST4> → ;	{ ; }	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<SST4> → . <SST3'>	{ . }		First Set
<SST4> → [<OE>] <ARRAY> <SST6>	{[]}		First Set



CFG's	First Set	Follow Set	Selection Set
<b>&lt;SST5&gt;</b> → . <SST3'>	{.}	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST5&gt;</b> → [<OE>] <ARRAY> <SST6>	{[]}		First Set
<b>&lt;SST5&gt;</b> → <SST8>	{ INC_DEC, = , COMP_ASGN, ( }		First Set
<b>&lt;SST6&gt;</b> → . ID <SST5>	{.}	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST6&gt;</b> → <SST8>	{ INC_DEC, = , COMP_ASGN, ( }		First Set
<b>&lt;SST8&gt;</b> → INC_DEC;	{INC_DEC}	{ WHILE , IF , DO , RETURN , TRY , THROW , FOR , SWITCH , BREAK , CONTINUE , ARRAYLIST , FINAL , DT , THIS , SUPER , ID , ELSE , ; , }	First Set
<b>&lt;SST8&gt;</b> → <ASGN_OP> <OE>;	{=, COMP_ASGN}		First Set
<b>&lt;SST8&gt;</b> → (<PL>) <SST4>	{( }		First Set