PLATYPUS LANGUAGE SPECIFICATION

-2.10 OPERATOR:
FIRST(operator)={==,<,>,<>}
<operator>-> ==|<|>
3 STATEMENTS:
-OPTIONAL STATEMENTS:
FIRST set:{AVID_T,SVID_T,KW_T (no PLATYPUS,ELSE,THEN,REPEAT),AVID_T,SVID_T,and $\in$}
<opt_statements>->statements()|$\in$
-3.2 STATEMENTS:
FIRST set={AVID,SVID,IF,USING,INPUT,OUTPUT}
<statements>->
<statement><statements'>
- 3.2 STATEMENTS PRIME:
FIRST set={AVID,SVID,IF,USING,INPUT,OUTPUT, $\in$}
<statements'>->
<statement><statements'>|$\in$
-3.2 STATEMENT:
FIRST set={AVID,SVID,IF,USING,INPUT,OUTPUT}
<statements>->
<assignment statement>
|<selection statement>
|<iteration statement>
|<input statement>
|<output statement>
-3.2.1 ASSIGNMENT_STATEMENT:
FIRST(assignment statement)={AVID,SVID}
<assignment statement>->
<assignment expression>;
-3.2.1 ASSIGNMENT EXPRESSION:
FIRST set={AVID,SVID}
<assignment expression>->
AVID=<artimetic expression>
|SVID=<string expression>
-3.2.2 SELECTION STATEMENT:
FIRST set={IF}
<selection statement>->
IF(<conditional expression>)THEN<opt_statements>
ELSE{<opt_statements>};

-3.2.3 ITERATION STATEMENT:
FIRST set={USING}
<iteration statement>->
USING(<assignment expression>,<conditional expression>,<assignment expression>)
REPEAT{
<opt_statement> };

-3.2.4 INPUT STATEMENT:
FIRST set={INPUT}
<input statement> ->
INPUT(<variable list>);

-3.2.5 OUTPUT_STATEMETNT:
FIRST set={OUTPUT}
<output statement>->
OUTPUT(<output list>);

-VARIABLE LIST:
FIRST set={variable identifier}
<variable list>->
<variable identifier><variable list'>

-VARIABLE LIST PRIME:
FIRST set={, , ∈}
<variable list'> ->
,<variable identifier> <variable list'>|∈

-OUTPUT LIST:
FIRST set={variable identifier,STR_T, ∈}
<output list> ->
<variable list>|STR_T|e

-3.3.1 ARITHMETIC EXPRESSION:
FIRST set={-,+,AVID_T,FPL_T,INL_T,(}
<arithemetic expression> ->
<unary arithemetic expression>
|<additive arithemetic expression>

-3.3.1 UNARY ARITHMETIC EXPRESSION:
FIRST set={-,+}
<unary arothemetic expression>->
- <primary arithemetic expression>
| + <primary arithemetic expression>

-3.3.1 ADDITIVE ARITHMETIC EXPRESSION:
FIRST set={AVID_T,FPL_T,INL_T,(}
<additive arithmetic expression>->
<multiplicative arithmetic expression> <additive arithmetic expression'>

- 3.3.1 ADDITIVE ARITHMETIC EXPRESSION':

FIRST set={+,-, ∈}

<additive arithmetic expression'>->

+ <multiplicative arithmetic expression> <additive arithmetic expression'>

|- <multiplicative arithmetic expression> <additive arithmetic expression'>

| ∈

-3.3.1 MULTIPLICATIVE ARITHMETIC EXPRESSION:

FIRST set={AVID_T,FPL_T,INL_T,(}

<multiplicative arithmetic expression>->

<primary arithmetic expression> <multuplicative arithmetic expression'>

- 3.3.1 MULTIPLICATIVE ARITHMETIC EXPRESSION PRIME:

FIRST set={*,/, ∈}

<multiplicative arithmetic expression'> ->

* <primary arithmetic expression> <multuplicative arithmetic expression'>

| /<primary arithmetic expression> <multuplicative arithmetic expression'>

| e

-3.3.1 PRIMARY ARITHMETIC EXPRESSION:

FIRST set={AVID_T,FPL_T,INL_T,(}

<primary arithmetic expression> ->

AVID_T

| FPL_T

| INL_T

| (<arithmetic expression>)

-3.3.2 STRING EXPRESSION:

FIRST set={SVID_T,STR_T}

<string expression> ->

<primary string expression> <string expression'>

-3.3.2 STRING EXPRESSION PRIME:

FIRST set={#, ∈}

<string expression'>->

<primary string expression> <string expression'>|e

-3.3.2 PRIMARY STRING EXPRESSION:

FIRST set={SVID_T,STR_T}

<primary string expression> ->

SVID_T|STR_T

-3.3.3 CONDITIONAL EXPRESSION:

FIRST set={AVID_T,FPL_T,INL_T,SVID_T,STR_T}

<conditional expression> ->

<logical OR expression>

-3.3.3 LOGICAL OR:

FIRST set={AVID_T,FPL_T,INL_T,SVID_T,STR_T}

<logical OR expression>->

<logical AND expression>

|<logical OR expression'>

- 3.3.3 LOGICAL OR':

FIRST set={.OR., ∈}

<logical OR expression'> ->

.OR. <logical AND expression> <logical OR expression'>|∈

-3.3.3 LOGICAL AND:

FIRST set={AVID_T,FPL_T,INL_T,SVID_T,STR_T}

<logical AND expression> ->

<relational expression> <logical AND expression'>

-3.3.3 LOGICAL AND PRIME:

FIRST set={.AND., ∈}

<logical AND expression'> ->

.AND. <relational expression><logical AND expression'>|∈

-3.3.4 RELATIONAL EXPRESSION:

FIRST set={AVID_T,FPL_T}

<relational expression>->

<primary a_relational expression> <operator> <primary a_relational expression>

|<primary s_relational expression> <operator> <primary s_relational expression>

-3.3.4 PRIMARY A RELATIONAL EXPRESSION :

FIRST set={AVID_T,FPL_T,INL_T}

<primary a_relational expression>->

AVID_T | FPL_T | INL_T

-3.3.4 PRIMARY S RELATIONAL EXPRESSION :

FIRST set={SVID_T,STR_T}

<primary s_relational expressino>->

<primary string expression>