

## Gramática MiniPython

Program -> 'class' ID ':' inicioBloque <field\_decl>\* finBloque <method\_call>\*

field\_decl -> <assign>

method\_decl -> 'def' ID ( '(' ID (',' ID)\* ')' )? ':' <block>

block -> <inicioBloque><statement>\*<finBloque>

<statement> -> ID <Statementtp>

| print <methodcall>

| read <methodcall>

| 'if' <expr> ':' ( 'elif' <expr> ':' <block>)\* ( 'else' ':' <block> )

| 'while' <expr> ':' <block>

| 'for' ID 'in' <range> ':' <block>

| 'return' <expr>

| 'break'

<Statementtp> -> 'ID'

| = <assignP>

| [ <assignP>

| ( methodcall2

<assign> -> <lvalue> '=' <expr>

<assignP> -> ['<expr> ']' '=' <expr>

| '=' <expr>

<method\_call> -> 'read' <lvalue>

| 'print' (<expr>(','<expr>)\*)?

<method\_call2> -> '(<expr>(','<expr>\*)? ')

<lvalue> -> ID  
| ID '[' <expr> ']

<expr> -> Logical  
| ' - ' <expr>  
| '~' <expr>  
| '[' <expr> ( ' , ' <expr> )\* ' ]'

<exprP> -> '[' <expr> ']  
| '(' <methodcall2>

<Logical> -> Relacional ('or' Relacional)\*  
| Relacional ('and' Relacional)\*

<Relacional> -> | AritmeticoSumaResta ( != AritmeticoSumaResta ) \*  
| AritmeticoSumaResta ( <= AritmeticoSumaResta ) \*  
| AritmeticoSumaResta ( >= AritmeticoSumaResta ) \*  
| AritmeticoSumaResta ( == AritmeticoSumaResta ) \*  
| AritmeticoSumaResta ( < AritmeticoSumaResta ) \*  
| AritmeticoSumaResta ( > AritmeticoSumaResta ) \*

< AritmeticoSumaResta > -> Produccion ( '+' Produccion ) \*  
| Produccion ( '-' Produccion ) \*

<Produccion> -> Shift ( '/' Shift ) \*  
| Shift ( '\*' Shift ) \*  
| Shift ( '%' Shift ) \*

<Shift>      ->   Term ('>' Term) \*  
                     |Term ('<<' Term)\*

```

<Term>      ->  <constant>

              | '(' <expr> ')'

              | ID exprP

              | '[' <expr> (<expr>)* ']'

```

<inicioBloque> -> INDENT

```
<finBloque>    ->    DEDENT
```

`<range>`             $\rightarrow$     `<expr> '...' <expr>`

```
<constant>    ->    'NUMBER' | 'CHARCONSTANT' | <bool_const>
```

```
<bool_const>    ->    'TRUE' | 'FALSE'
```