

(Enhanced) Grammar for Basic SPLAT 1.2

```
<program> ::= program <decls> begin <stmts> end ;

<decls> ::= ( <decl> )*

<decl> ::= <var-decl>
        | <func-decl>

<var-decl> ::= <label> : <type> ;

<func-decl> ::= <label> ( <params> ) : <ret-type> is <loc-var-decls> begin <stmts> end ;

<params> ::= <param> ( , <param> )*
        | ε

<param> ::= <label> : <type>

<loc-var-decls> ::= ( <var-decl> )*

<stmts> ::= ( <stmt> )*

<stmt> ::= <label> := <expr> ;
        | while <expr> do <stmts> end while ;
        | if <expr> then <stmts> else <stmts> end if ;
        | if <expr> then <stmts> end if ;
        | <label> ( <args> ) ;
        | print <expr> ;
        | print_line ;
        | return <expr> ;
        | return ;
```

`<expr>` ::= `(<expr> <bin-op> <expr>)`
| `(<unary-op> <expr>)`
| `<label> (<args>)`
| `<label>`
| `<literal>`

`<bin-op>` ::= `and` | `or` | `>` | `<` | `==` | `>=` | `<=` | `+` | `-` | `*` | `/` | `%`

`<unary-op>` ::= `not` | `-`

`<args>` ::= `<expr> (, <expr>)*`
| `ε`

`<label>` ::= *...sequence of alphanumeric characters and underscore, not starting with a digit...*

`<ret-type>` ::= `<type>` | `void`

`<type>` ::= `Integer` | `Boolean` | `String`

`<literal>` ::= `<int-literal>` | `<bool-literal>` | `<string-literal>`

`<int-literal>` ::= *...sequence of decimal digits...*

`<bool-literal>` ::= `true` | `false`

`<string-literal>` ::= *"...sequence of non-double-quote, non-backslash displayable characters and spaces..."*