Syntax of the Mini-C++ programming language:
Almost LL(1) grammar

Program → DeclarationList
DeclarationList → Declaration DeclarationList | ε
Declaration → ClassDeclaration | FunctionDeclaration
ClassDeclaration → **class** IDENTIFIER OptionalSuperclass **{** MemberDeclarations **} ;**
OptionalSuperclass → **: public** IDENTIFIER | ε
MemberDeclarations → FieldDeclarationList **public :** MethodDeclarationList
FieldDeclarationList → FieldDeclaration FieldDeclarationList | ε
FieldDeclaration → OptionalStatic VariableDeclaration
OptionalStatic → **static** | ε
VariableDeclaration → TypeName RestOfVariableDeclaration
TypeName → PrimitiveType | IDENTIFIER
PrimitiveType → **int** | **bool**
RestOfVariableDeclaration → Variable MoreVariables **;**
Variable → IDENTIFIER Dimensions
Dimensions → **[** NUMBER **]** Dimensions | ε
MoreVariables → **,** Variable MoreVariables | ε
MethodDeclarationList → MethodDeclaration MethodDeclarationList | ε
MethodDeclaration → OptionalStatic FunctionDeclaration
FunctionDeclaration → FunctionType IDENTIFIER **(** OptionalParameterList **)** Block
FunctionType → **void** | TypeName
OptionalParameterList → Parameter MoreParameters | ε
Parameter → TypeName IDENTIFIER
MoreParameters → **,** Parameter MoreParameters | ε
Block → **{** DeclarationOrStatementList **}**
DeclarationOrStatementList → DeclarationOrStatement DeclarationOrStatementList | ε
DeclarationOrStatement → PrimitiveDeclaration | KeywordStatement | OtherDeclarationOrStatement
PrimitiveDeclaration → PrimitiveType RestOfVariableDeclaration
OtherDeclarationOrStatement → IDENTIFIER RestOfDeclarationOrStatement
RestOfDeclarationOrStatement → RestOfVariableDeclaration | RestOfExpressionStatement
Statement → KeywordStatement | ExpressionStatement
KeywordStatement → Selection | Iteration | Jump | Input | Output | Block
Selection → **if (** Expression **)** Statement OptionalElse
OptionalElse → **else** Statement | ε
Iteration → **while (** Expression **)** Statement | **do** Statement **while (** Expression **) ;**
Jump → **return** OptionalExpression **;**
OptionalExpression → Expression | ε
Input → **cin** >> IDENTIFIER MorePrimary **;**
Output → **cout** << OutputElement **;**
OutputElement → Expression | STRING | **endl**
ExpressionStatement → IDENTIFIER RestOfExpressionStatement
RestOfExpressionStatement → MorePrimary OptionalAssignment **;**
OptionalAssignment → = Expression | ε

Expression → Disjunction OptionalConditionalPart
OptionalConditionalPart → **?** Expression **:** Expression | ε
Disjunction → Conjunction MoreConjunctions
MoreConjunctions → **||** Conjunction MoreConjuctions | ε
Conjunction → Equality MoreEqualities
MoreEqualities → **&&** Equality MoreEqualities | ε
Equality → Inequality RestOfEquality
RestOfEquality → == Inequality | **!=** Inequality | ε
Inequality → Sum RestOfInequality
RestOfInequality → < Sum | > Sum | <= Sum | >= Sum | ε
Sum → Product MoreProducts
MoreProducts → + Product MoreProducts | − Product MoreProducts | ε
Product → Factor MoreFactors
MoreFactors → ***** Factor MoreFactors | **/** Factor MoreFactors | **%** Factor MoreFactors | ε
Factor → Primary | + Primary | − Primary | **!** Primary
Primary → IDENTIFIER MorePrimary | NUMBER | **true** | **false** | **(** Expression **)**
MorePrimary → ArrayAccess | FieldAccess | FunctionCall | ε
ArrayAccess → **[** Expression **]** MorePrimary
FieldAccess → **.** IDENTIFIER MorePrimary
FunctionCall → **(** OptionalArgumentList **)** MorePrimary
OptionalArgumentList → Expression MoreExpressions | ε
MoreExpressions → **,** Expression MoreExpressions | ε