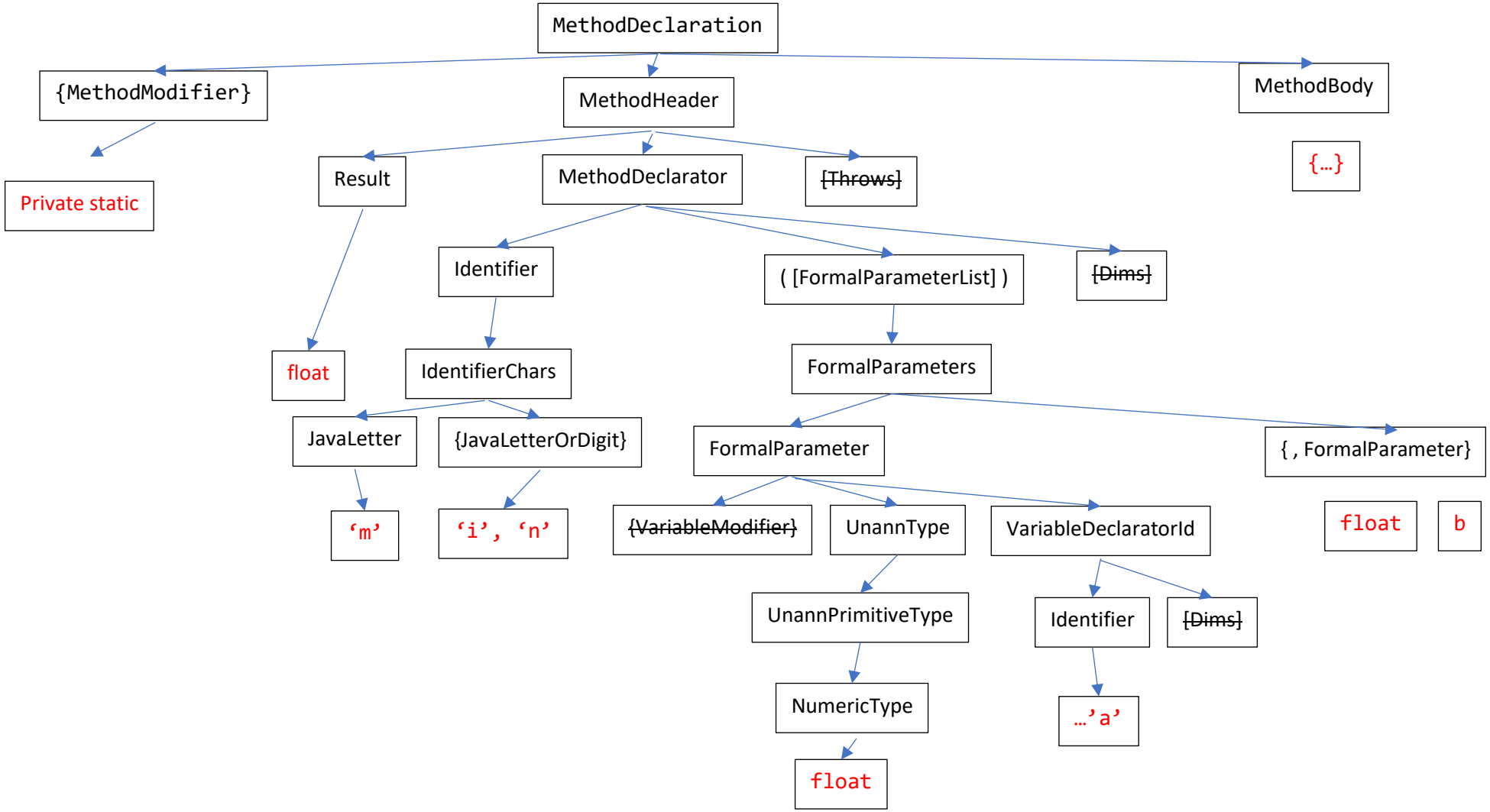
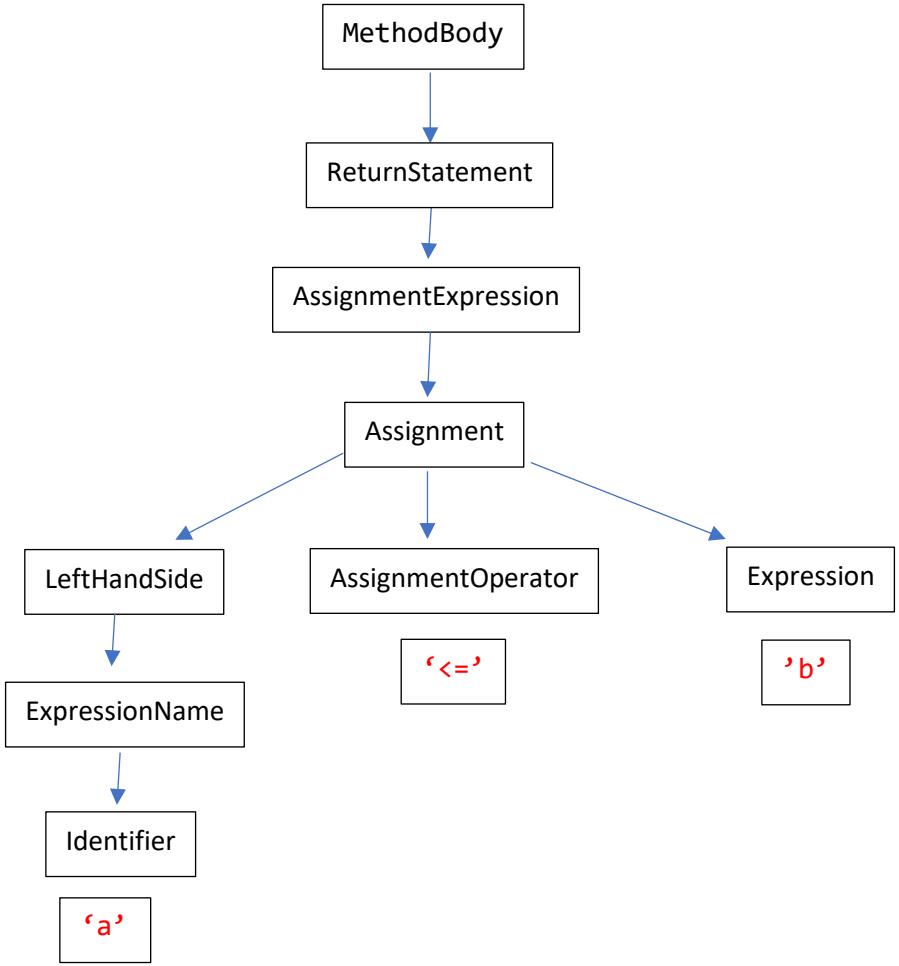
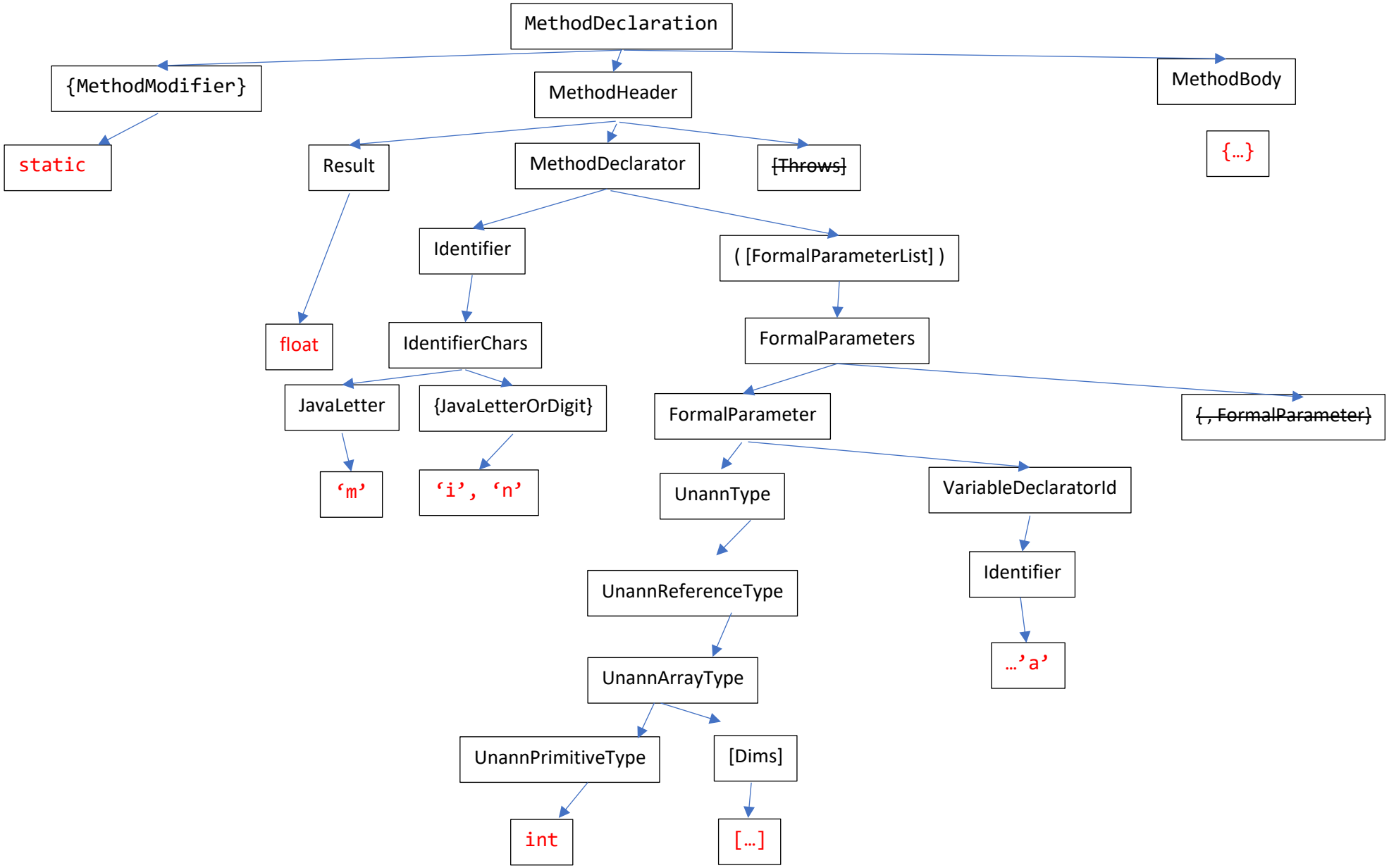
Task 1:

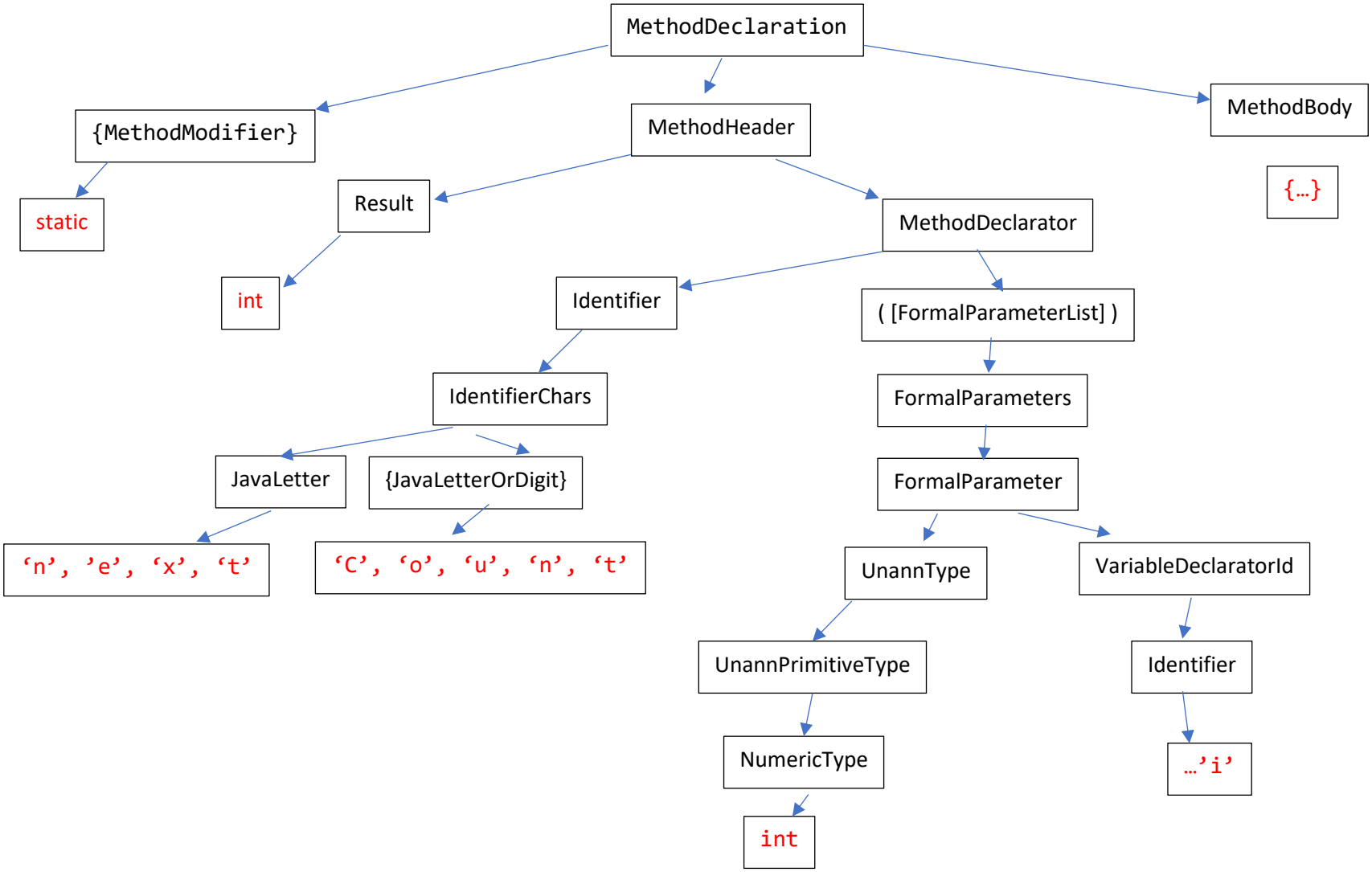

MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
Private static
Result
MethodDeclarator
[Throws]
{…}
Identifier
([FormalParameterList])
[Dims]
float
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
{ , FormalParameter}
‘m’
‘i’, ‘n’
{VariableModifier}
UnannType
VariableDeclaratorId
float
b
UnannPrimitiveType
Identifier
[Dims]
NumericType
…’a’
float

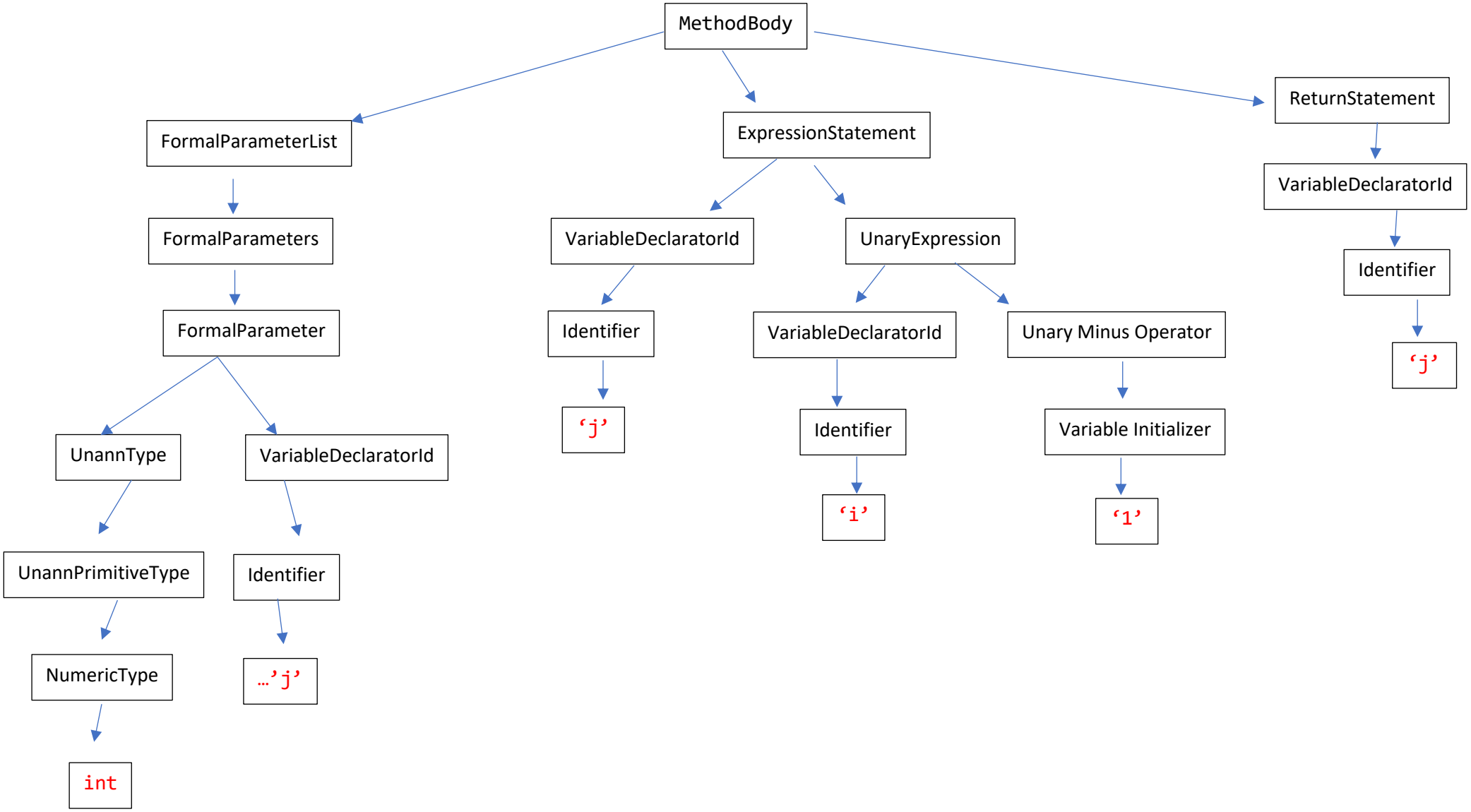

MethodBody
ReturnStatement
AssignmentExpression
Assignment
LeftHandSide
AssignmentOperator
Expression
‘<=’
’b’
ExpressionName
Identifier
‘a’

Task 2:

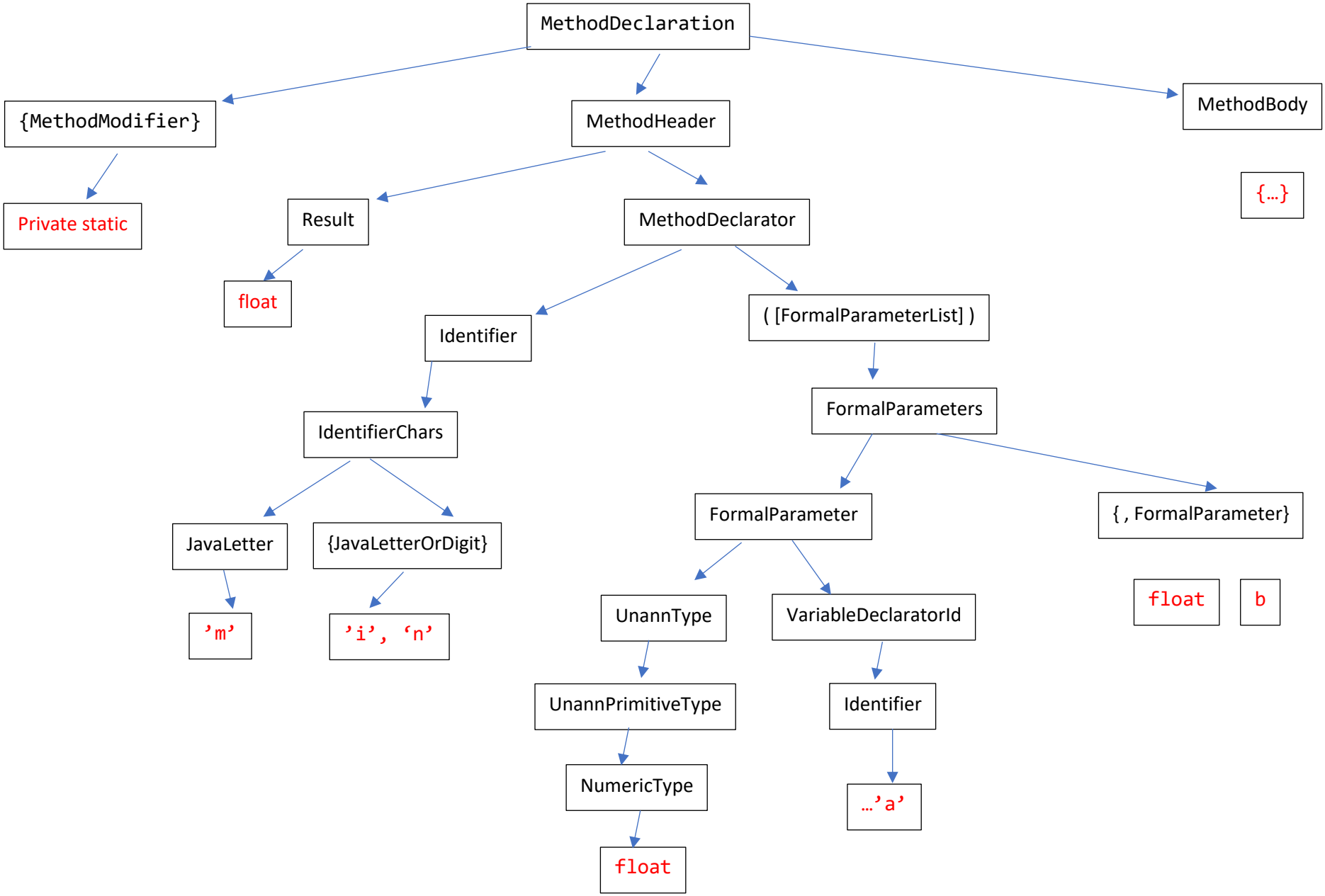

MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
static
Result
MethodDeclarator
~~[Throws]~~
{…}
Identifier
([FormalParameterList])
float
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
~~{, FormalParameter}~~
'm'
'i', 'n'
UnannType
VariableDeclaratorId
UnannReferenceType
Identifier
…'a'
UnannArrayType
UnannPrimitiveType
[Dims]
int
[…]

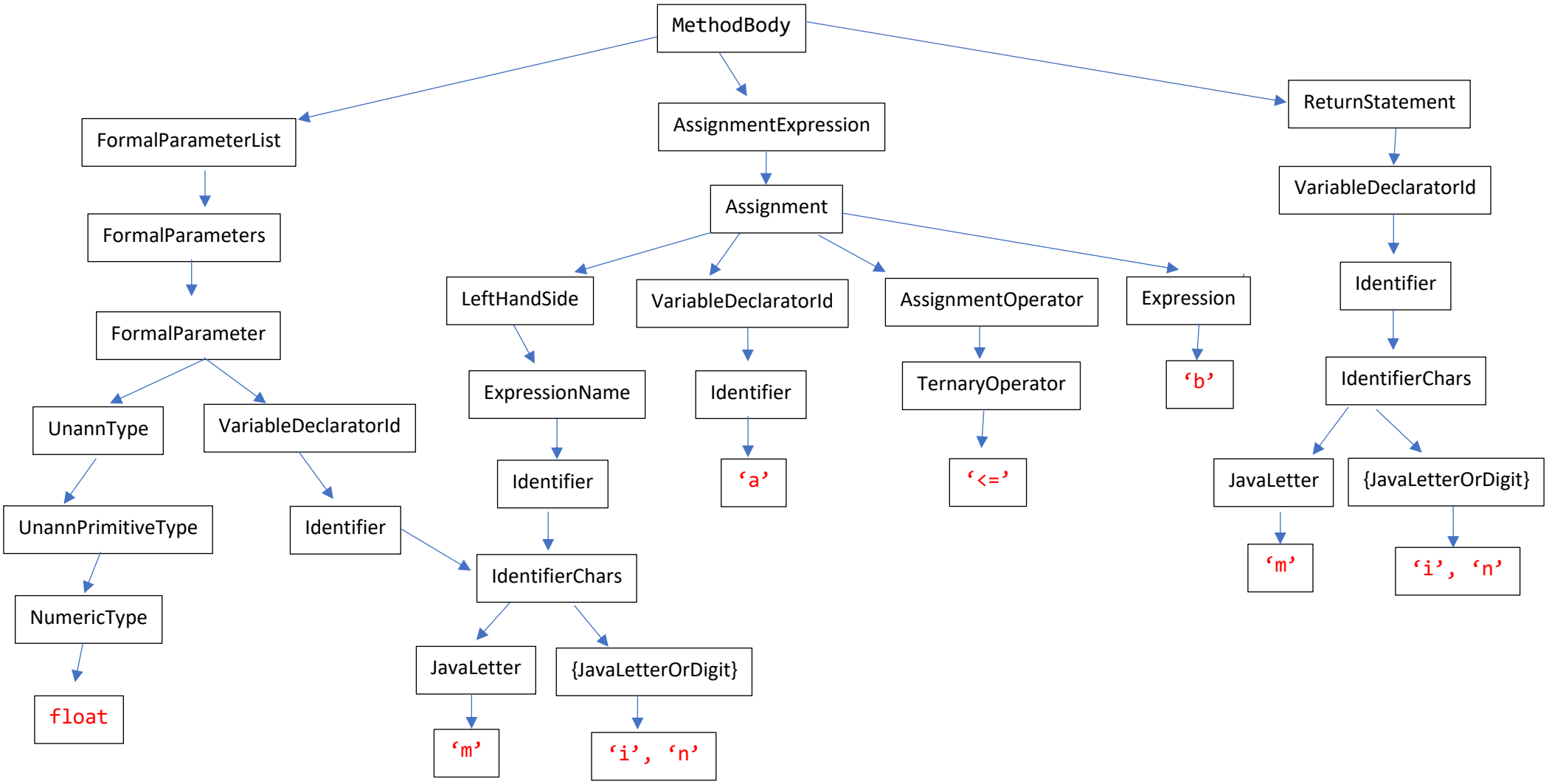
Task 3:


MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
static
Result
{…}
MethodDeclarator
int
Identifier
([FormalParameterList])
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
‘n’, ’e’, ‘x’, ‘t’
‘C’, ‘o’, ‘u’, ‘n’, ‘t’
UnannType
VariableDeclaratorId
UnannPrimitiveType
Identifier
NumericType
…’i’
int

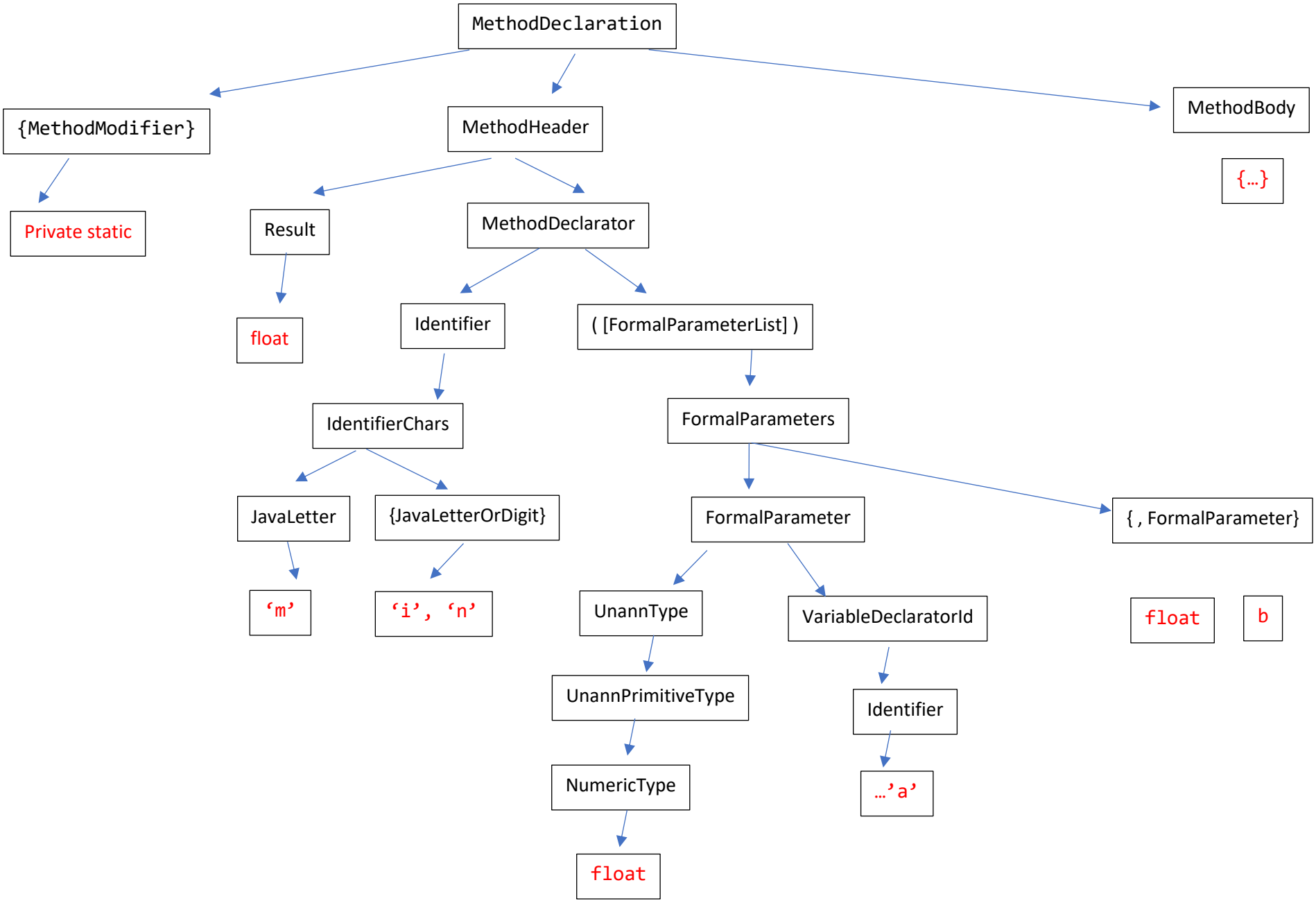

MethodBody
FormalParameterList
FormalParameters
FormalParameter
UnannType
UnannPrimitiveType
NumericType
int
VariableDeclaratorId
Identifier
…'j'
ExpressionStatement
VariableDeclaratorId
Identifier
'j'
UnaryExpression
VariableDeclaratorId
Identifier
'i'
Unary Minus Operator
Variable Initializer
'1'
ReturnStatement
VariableDeclaratorId
Identifier
'j'

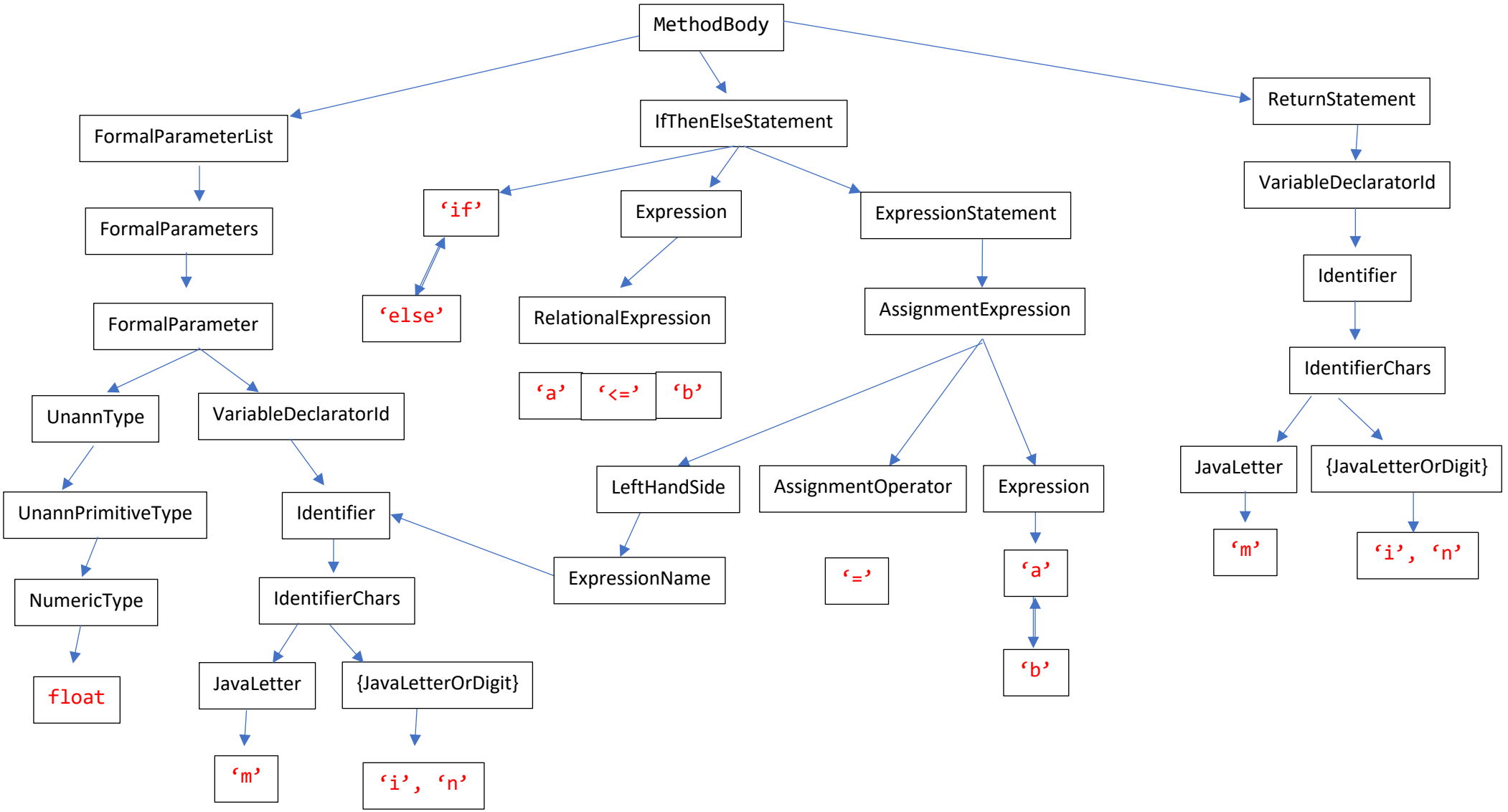
Task 4:


MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
Private static
Result
MethodDeclarator
{…}
float
Identifier
([FormalParameterList])
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
{ , FormalParameter}
'm'
'i', 'n'
UnannType
VariableDeclaratorId
float
b
UnannPrimitiveType
Identifier
NumericType
…'a'
float

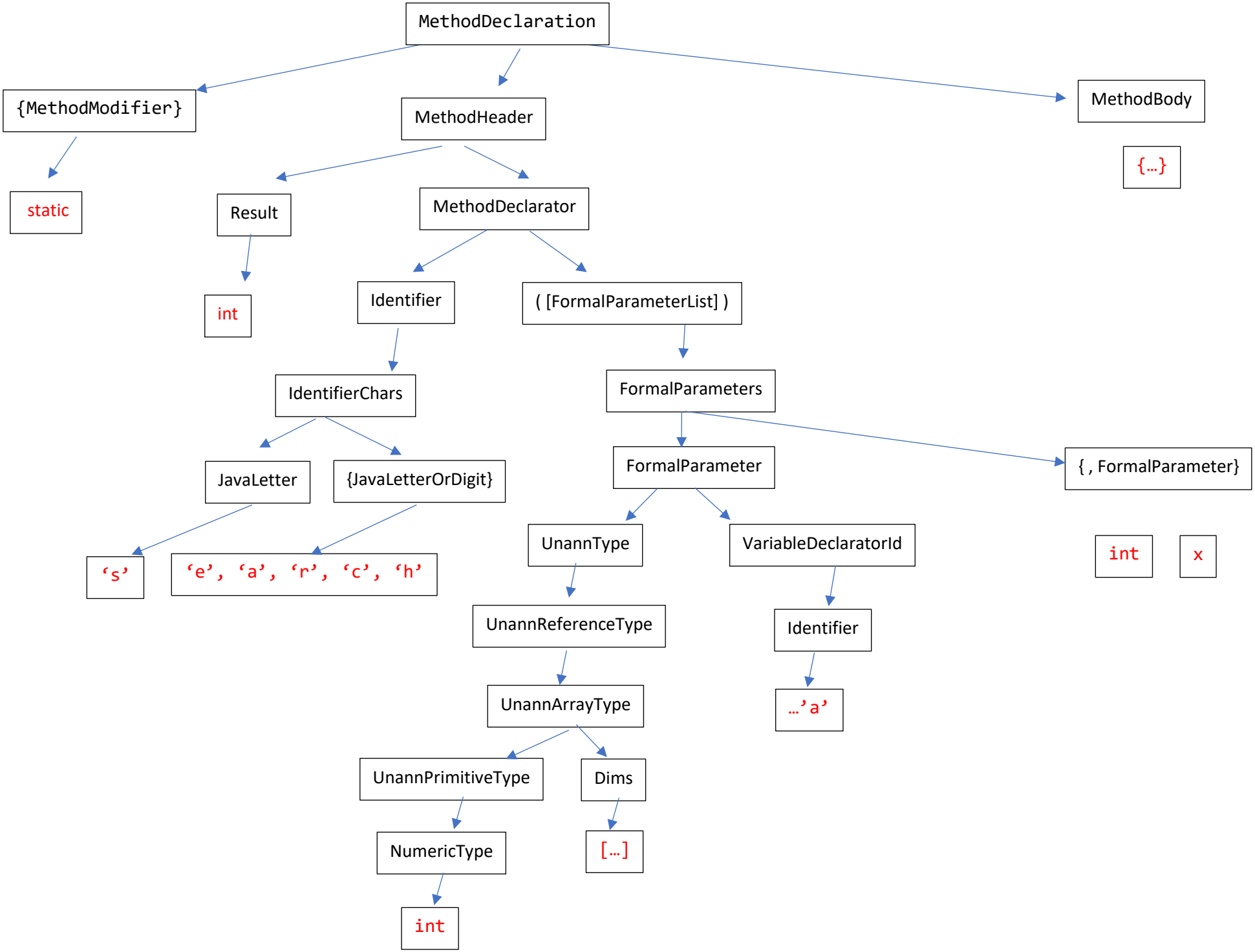

MethodBody
FormalParameterList
FormalParameters
FormalParameter
UnannType
UnannPrimitiveType
NumericType
float
VariableDeclaratorId
Identifier
IdentifierChars
JavaLetter
'm'
{JavaLetterOrDigit}
'i', 'n'
AssignmentExpression
Assignment
LeftHandSide
ExpressionName
Identifier
IdentifierChars
JavaLetter
'm'
{JavaLetterOrDigit}
'i', 'n'
VariableDeclaratorId
Identifier
'a'
AssignmentOperator
TernaryOperator
'<='
Expression
'b'
ReturnStatement
VariableDeclaratorId
Identifier
IdentifierChars
JavaLetter
'm'
{JavaLetterOrDigit}
'i', 'n'

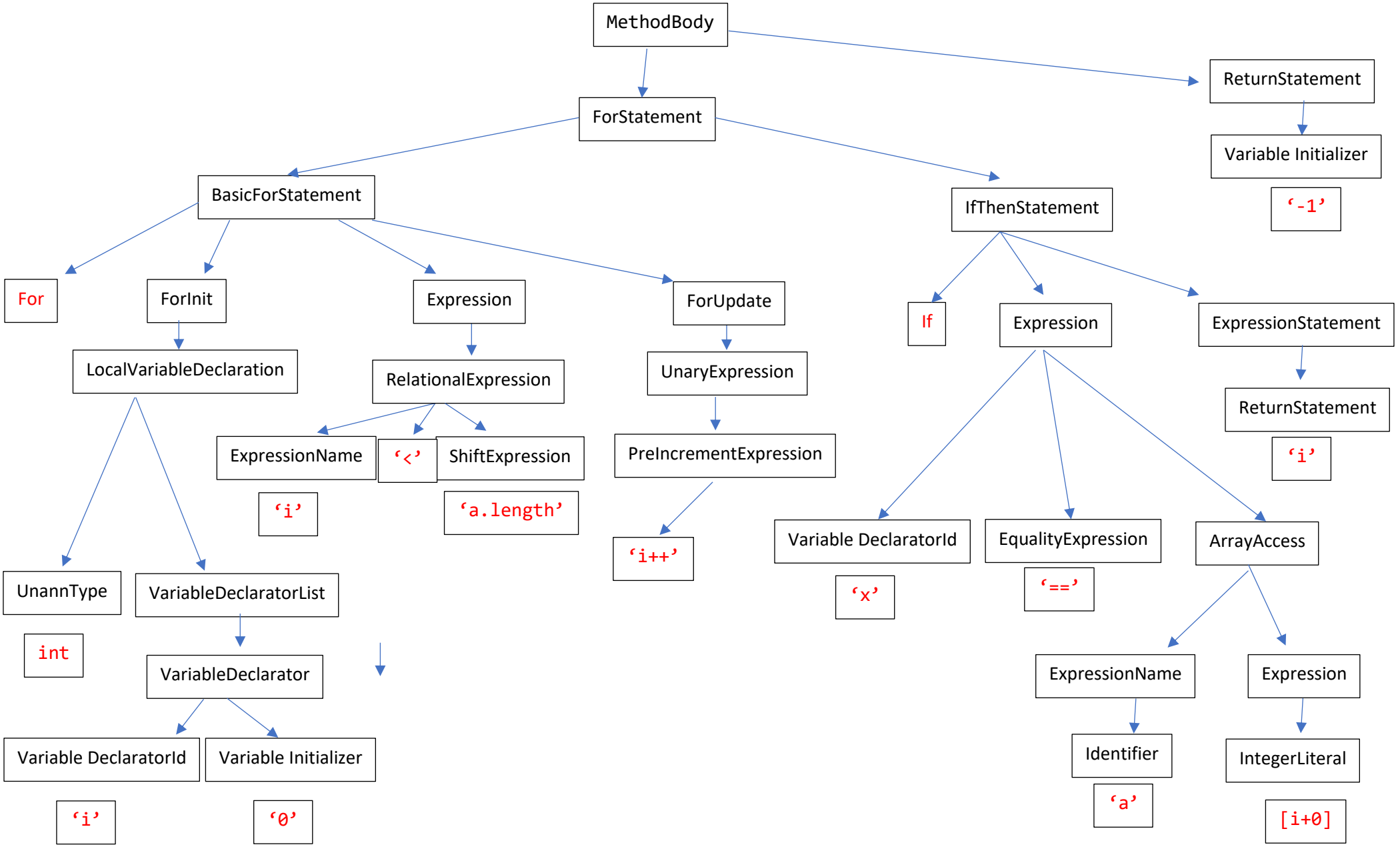
Task 5:


MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
{…}
Private static
Result
MethodDeclarator
float
Identifier
([FormalParameterList])
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
{ , FormalParameter}
‘m’
‘i’, ‘n’
UnannType
VariableDeclaratorId
float
b
UnannPrimitiveType
Identifier
NumericType
…’a’
float

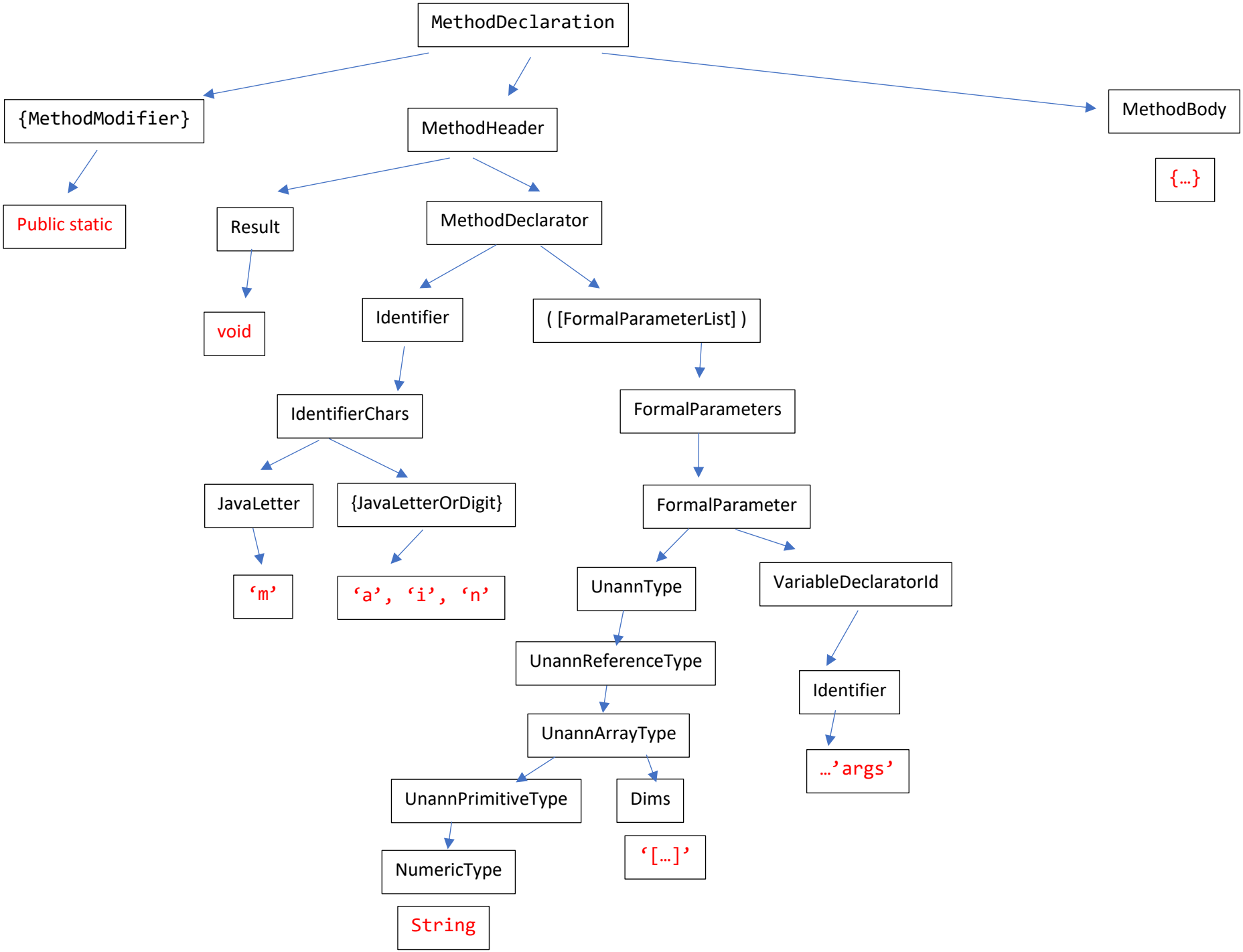

MethodBody
FormalParameterList
FormalParameters
FormalParameter
UnannType
UnannPrimitiveType
NumericType
float
VariableDeclaratorId
Identifier
IdentifierChars
JavaLetter
'm'
{JavaLetterOrDigit}
'i', 'n'
IfThenElseStatement
'if'
'else'
Expression
RelationalExpression
'a'
'<='
'b'
ExpressionStatement
AssignmentExpression
LeftHandSide
ExpressionName
AssignmentOperator
'='
Expression
'a'
'b'
ReturnStatement
VariableDeclaratorId
Identifier
IdentifierChars
JavaLetter
'm'
{JavaLetterOrDigit}
'i', 'n'

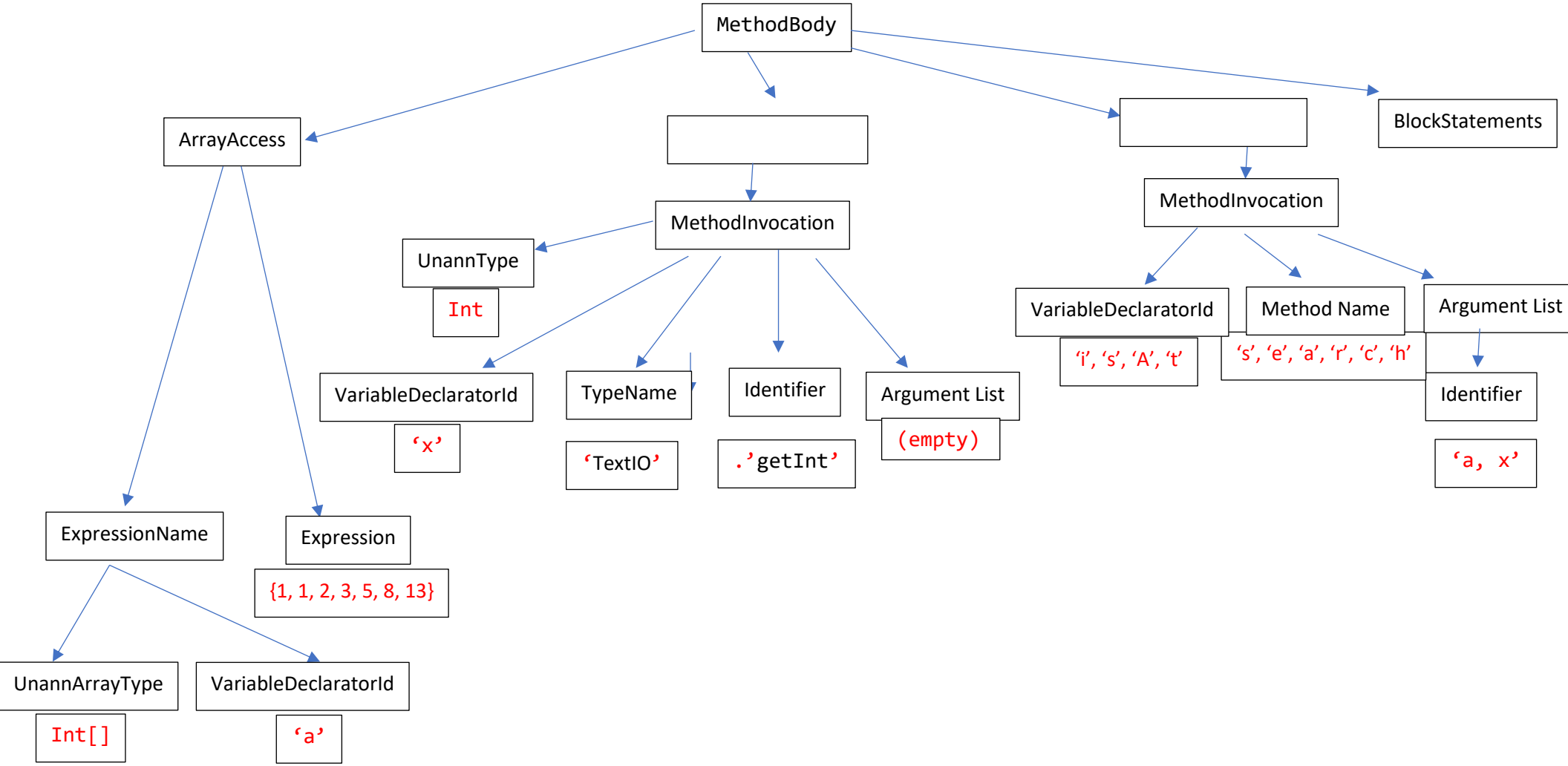
Task 6:


MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
static
Result
MethodDeclarator
{…}
int
Identifier
([FormalParameterList])
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
{ , FormalParameter}
‘s’
‘e’, ‘a’, ‘r’, ‘c’, ‘h’
UnannType
VariableDeclaratorId
int
x
UnannReferenceType
Identifier
UnannArrayType
…’a’
UnannPrimitiveType
Dims
NumericType
[…]
int


MethodBody
ReturnStatement
ForStatement
Variable Initializer
'-1'
BasicForStatement
IfThenStatement
For
ForInit
Expression
ForUpdate
If
Expression
ExpressionStatement
LocalVariableDeclaration
RelationalExpression
UnaryExpression
ReturnStatement
ExpressionName
'<'
ShiftExpression
PreIncrementExpression
'i'
'a.length'
'i++'
'i'
UnannType
VariableDeclaratorList
Variable DeclaratorId
EqualityExpression
ArrayAccess
int
VariableDeclarator
'x'
'=='
ExpressionName
Expression
Variable DeclaratorId
Variable Initializer
Identifier
IntegerLiteral
'i'
'0'
'a'
[i+0]

Task 7:


MethodDeclaration
{MethodModifier}
MethodHeader
MethodBody
Public static
Result
MethodDeclarator
{…}
void
Identifier
([FormalParameterList])
IdentifierChars
FormalParameters
JavaLetter
{JavaLetterOrDigit}
FormalParameter
‘m’
‘a’, ‘i’, ‘n’
UnannType
VariableDeclaratorId
UnannReferenceType
Identifier
UnannArrayType
…’args’
UnannPrimitiveType
Dims
‘[…]’
NumericType
String


MethodBody
ArrayAccess
MethodInvocation
BlockStatements
MethodInvocation
UnannType
Int
VariableDeclaratorId
'x'
TypeName
'TextIO'
Identifier
.'getInt'
Argument List
(empty)
VariableDeclaratorId
'i', 's', 'A', 't'
Method Name
's', 'e', 'a', 'r', 'c', 'h'
Argument List
Identifier
'a, x'
ExpressionName
Expression
{1, 1, 2, 3, 5, 8, 13}
UnannArrayType
Int[]
VariableDeclaratorId
'a'

Task 8:

- No.
  MethodDeclaration:
  {MethodModifier} MethodHeader MethodBody
  MethodModifier:
  (one of)
  Annotation public protected private abstract static final synchronized native strictfp

Task 9:

BinaryIntegerLiteral

0B001100010 T

0b001_110_001L T

1b0_0_1L (‘1b’) -> F

0B012L (contain ‘2’) -> F

1B0L (‘1B’) -> F

0B0 0 1L (contain space) -> F