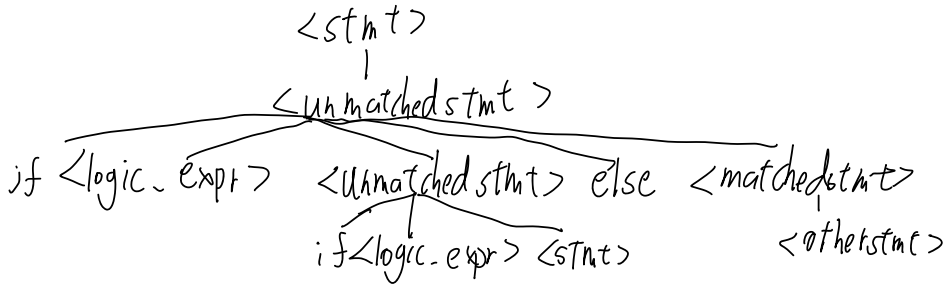
1.

<STMT> → <MATCHEDSTMT> | <UNMATCHEDSTMT>

<MATCHEDSTMT> → if <LOGICEXPR> <MATCHEDSTMT> else <MATCHEDSTMT> | <OTHERSTMT>

<UNMATCHEDSTMT> → if <LOGICEXPR> <STMT> | if <LOGICEXPR> <UNMATCHEDSTMT> else <MATCHEDSTMT>

<OTHERSTMT> → a := 1 (Some other statements)



2.

A(x) = x is a student

B(x) = x is in this class

C(x) = x has visited Shanghai

D(x) = x has visited Hangzhou

$\forall x (A(x) \vee B(x)) \rightarrow (C(x) \wedge D(x))$