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## Analyzing part of type control in Java

At first, we say few words about the fact that we need type checking, because we want to maintain the correct meaning of the stored data and that we have two main principes of type checking (static and dynamic control).

Then, we move to Java language and we say that there are two main parts of type checking, the first pre-analysis and the second analysis. We focus on analysis and describe modifying abstract syntactical tree and symbol table in three main situations. These situations are simple variable declaration, harder field selection and typing in expressions.

We will explain that variable shadowing is situation when we have global variable with some name as local variable and that this situation is solved by stack type of symbol table.

When we need to get the type of varible defined by full path there is problem with interpretation. In this case we need to reclassify an ambiguous target. While talking about type checking in expressions we explain four terms connected with Cast Operations – widening, narrowing, boxing and unboxing.

At the end of presentation, we point out that in Java is one speciality of type control, where we check, if there was made an assignment before accessing variable.