

Presentation Topic:

Symbol Table.

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Abstract:

We are going to talk about “Symbol Table” and all its possible implementations. We have several possibilities of implementation that we are going to enumerate then and describe them briefly:

- *Basic implementation techniques:* We are going to explain the basic idea of implementation of a symbol table with some data structures (Binary search trees, hash tables, and string space arrays). In addition we are going to talk about the convenience and inconvenience of using them and their complexity of search operation. Then we will explain why some collisions appear in hash tables and how to resolve them.
- *Block-structured symbol table:* We are giving some information about this kind of symbol table. We also are going to explain how symbol table structures are affected by language features that control visibility of names, alter search rules, and allow multiple uses of names in one scope. We also consider the impact of features that involve implicit declarations and references to names before they are defined.

We will go deep into this two topics about symbol table. We will support this explanation with some diagrams for better understanding.