

(4)

There are two major activities to relate the symbol table, namely: inserting values and accessing stored information.

Value insertion occurs primarily when the parser processes declarations, while the value retrieval occurs elsewhere.

Value insertion operations include creating a record for a new symbol, assigning values of fields of the records and making adjustments to the internal peeping.

Value retrieval operations consists of searching backward in the scope to find an identifier by name, examining the formal parameters of a procedure to match them with the actual arguments and examining values in a found record to compare with actual values found in the code.

Information is entered into the symbol table in various times. It is scanner which enter the symbols in the table first and it is not aware of the syntax and block structure of a program. The scanner views the source text as an arbitrary sequence of symbols. It just inserts a name in the symbol table whenever it occurs first in the program text. The scanner assigns the same index to all occurrences of the same name, even if it is used for different purposes in different blocks.

Fixed-length entry: If the number of characters in the symbol are restricted, we can design a symbol table entry as a 'fixed-length entry'.