

# **COMPILE DESIGN**

## **SYMBOL TABLE REPORT**

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Symbol table is an important data structure created and maintained by compilers in order to store information about the occurrence of various entities such as variable names, function names, objects, classes, interfaces, etc.

Symbol table is used by both the analysis and the synthesis parts of a compiler.

A symbol table is simply a table which can be either linear or a hash table. It maintains an entry for each name.

Variable names and constants

Procedure and function names

Literal constants and strings

Compiler generated temporaries

Labels in source languages

Above items are stored in symbol table

```
Enter Expression (terminated by $):x=a+b$
Given Expression:x=a+b
Lexxems Address Type
x      000000000062FDA0      Identifier
=      000000000062FDA1      Operator
a      000000000062FDA2      Identifier
+      000000000062FDA3      Operator
b      000000000062FDA4      Identifier

-----
Process exited after 8.547 seconds with return value 0
Press any key to continue . . .
```

In Symbol Table

, we are taking expressions from user which contain some integers,characters,and some

operators. It will identify characters as identifiers ,  
digits as constants. In the above example

X,a,b are identifiers and

=,+ are operators.