Programming Languages: Lecture 18 Symbol Tables and Immediate Representation

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1 Symbol Table

- The store house of context-sensitive and run-time information about every identifier in the source program.

- All accesses relating to an identifier require to first find the attributes of the identifier from the symbol table

- Usually organized as a hash table - provides fast access.

- Compiler-generated temporaries may also be stored in the symbol table

Attributes stored in a symbol table for each identifier,

- type

- size

- scope/visibility information

- base address

- addresses to location of auxiliary symbol tables

- address of the location containing the string which actually names the identifier and its length in the string pool

go back and watch or read this portion again

2 Intermediate Representation

IR are important for reasons of portability, ie, platform independence.

- No commitment to word boundaries or byte boundaries.

- No commitment to representation of,
    - int vs. float
    - float vs. double,
    - packed vs. unpacked,
    - strings – where and how?