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CS3363

HW2

Chapter 2

5) Because the lack of floating point hardware. No computer that support doing operations on floating point value back then.

8) The primary application area of computer when FORTRAN designed was for scientific computations.

15) Lisp was developed at MIT by John McCarthy.

28) PL/I was designed to replace FORTRAN and COBOL.

47) The first application for java is Sun Microsystems.

Chapter 3 – Review Question

5) A sentence is a sentential form that has only terminal symbols. A sentence form is every string of symbols in the derivation.

8) Static semantics is more on the legal forms of programs (syntax rather semantics) and is only indirectly related to the meaning of the programs during execution. Static semantics is so named because the analysis required checking these specifications can be done at compile time. Dynamic semantics is describing the meaning of the programs. Programmers need to know precisely what statements of a language do. Compile writers determine the semantics of a language for which they are writing compilers from English descriptions.

10) The synthesized attributes are the result of the attribute evaluation rules, and may also use the values of the inherited attributes. The inherited attributes are passed down from parent nodes. In some approaches, synthesized attributes are used to pass semantic information up the parse tree, while inherited attributes help pass semantic information down it.

For instance, when constructing a language translation tool, such as a compiler, it may be used to assign semantic values to syntax constructions. Also, it is possible to validate semantic checks associated with a grammar, representing the rules of a language not explicitly imparted by the syntax.

19) Two things must be defined for each language entity in order to construct a denotational description of the language are objects and functions.

20) The top part of an inference rule is called the antecedent.

Problem Set

6)

8)

10)

12)

13)