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Course code: CSI 411

Course Title: compiler

"Mid Assessment"

Ans: to the Q: No: 01

Q: Ans: Types of Compiler: Compilers are divided into three parts - ① Single pass compilers. ② Two pass compilers. ③ Multipass compilers. The "compiler" was word first used in the early 1950s by Grace Murray Hopper. Steps for language processing system are Preprocessor, Interpreter, assembler, linker/loader.

Phases of compiler: The phases of compiler design are logical analysis, syntage analysis, semantic analysis, intermediate code generation, Code optimisation & code generation.

(b) Disadvantages of Compiler :

- ① Compilation time.
- ② Error detection.
- ③ Portability.
- ④ Execution speed.
- ⑤ Lack of flexibility.
- ⑥ Resource consumption.

Advantage of compiler :

1. Improved performance.
2. Portability.
3. Increased security.
4. Debugging support.
5. No dependencies.

(c) Compiler design helps full implementation of high-level programming language. Supports optimization for computer architecture parallelism. A compiler is a program that translate a high level language (for example, C, C++ & Java) into a low level language (object program or machine programme)

Top down parsing: Top-down parsing in computer science is a parsing strategy where one first looks at the highest level of the parse tree & works down they parse tree by using the non-terminating rules of a formal grammar. LL parsers are a type of parser that uses a top-down parsing strategy.

Bottom-up parsing: Bottom parsers work by "shifting" symbols onto a stack until the top of stack contains a right-hand side of a production. The stack is then "reduced" by replacing the production's right hand side by its left hand side.

Ans: to: the: Q: No: 02

a) Ans: Natural Language Processing is an inter disciplinary subfield of Computer Science & Linguistics. It is primarily concerned with giving computers the ability to support & manipulate human language.

b) Ans: A Cross compiler is a compiler capable of creating executable code for a platform other than the one on which the compiler is running. For example, a compiler that runs on a PC but generates code that runs on an Android smart phone is a cross compiler.

c) Ans: A source-to-source translator, source-to-source compiler (SSC compiler), trans compiler, or transpiler is a type of translation that takes the source code of a program written in a programming language as its input & produces or equivalent source code in the same or a different programming language.