

Victoria University of Bangladesh  
Department of Computer Science & Engineering

Name: Ashit Kumar (Abit)

Student ID: 2221220011

Mid Assessment

Program: B.Sc. in (CSE)

Semester: Fall-2023

Batch: 22nd (Evening)

Course code: CSI-411

Course Title: Compilers

①

### Ans to the ques No-1-(a)

Types of Compiler: Compiler are divided into three parts-

① Single pass Compiler. (2) Two pass Compilers. (3) Multipass Compiler. The Compiler was word first used in the early 1950s by Carole murray Hopper. Steps for language processing system are: preprocessor, Interpreter, Assembler, Linker, Loader.

phases of Compiler:

The phases of compiler design are lexical analysis, syntax analysis, semantic analysis, intermediate code generation, code optimisation, and code generation.

### Ans to the ques No-1(b)

Disadvantages of compiler:

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

Advantages of compiler:

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

②

### Ans to the Ques No-1-(c)

Compiler design helps full implementation of high-level programming languages, supports optimization for a computer architecture platform. A compiler is a program that translates a high level language (for example, C, C++, and Java) into a low-level language (object-program or machine program).

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 and works down the parse tree by using the rewriting rules of a formal grammar. LL parsers are a type of parser that use 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.

3

### Ans to the ques no-2 (a)

Natural language processing is an interdisciplinary subfield of computer science and linguistics. It is primarily concerned with giving computers the ability to support and manipulate human language.

### Ans to the ques no-2 (b)

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 smartphone is a cross compiler.

### Ans to the ques no-2 (c)

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