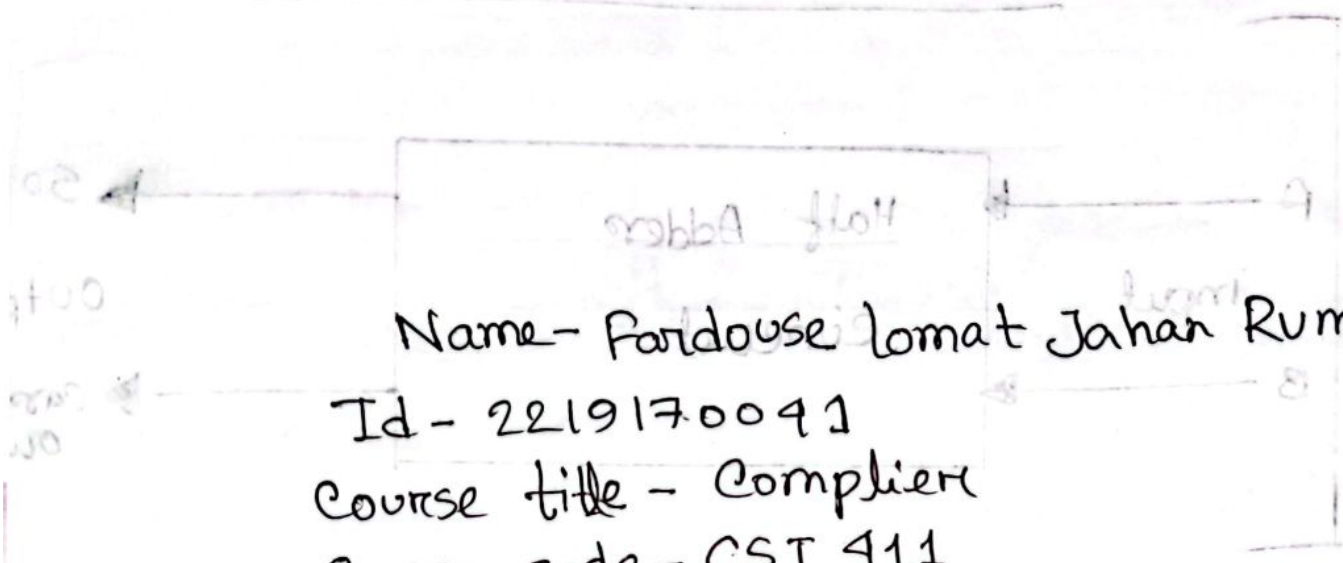


Ans to the Ques no 01(b)



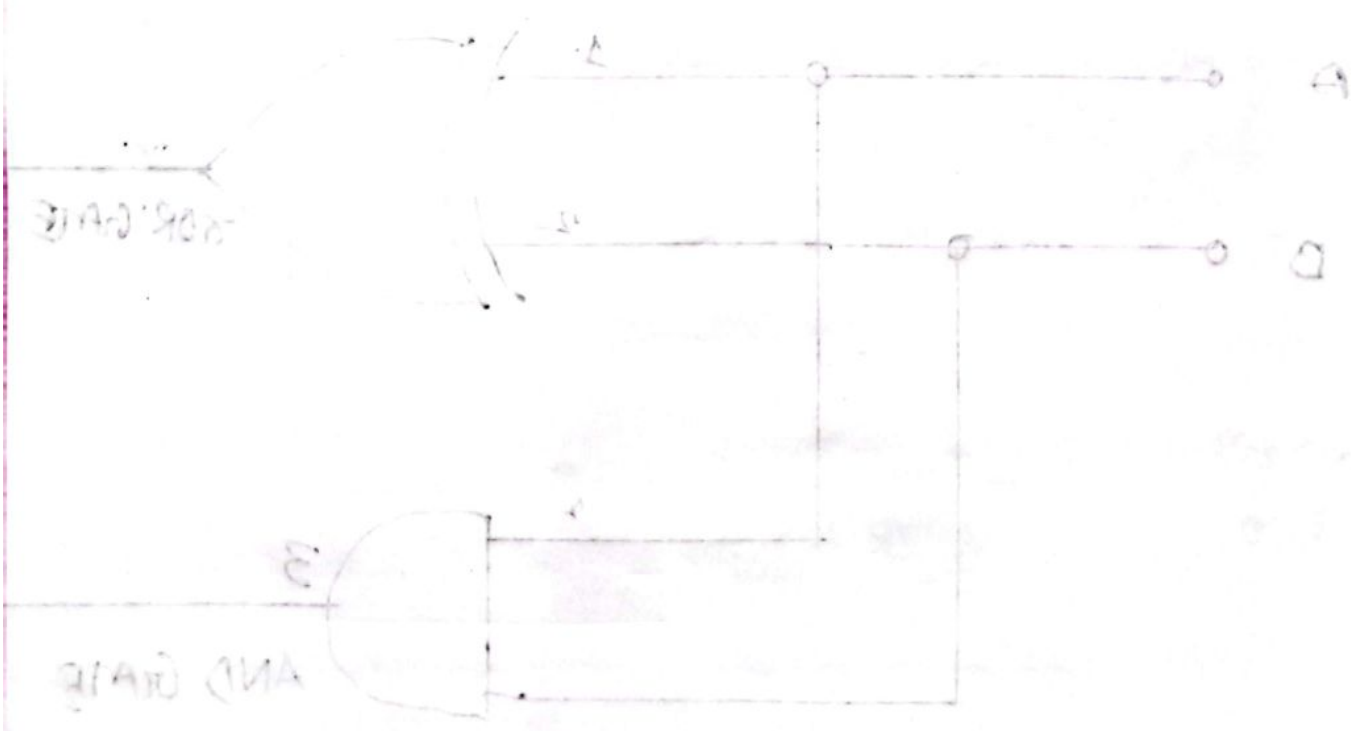
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Course title - Computer

Course code - CSI 411

Logic



Ans to the Ques. No-01(a)

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

Types of compiler —

☐ Single Pass compilers

☐ Two pass compilers.

☐ Multipass Compilers.

☐ Cross compiler. They produce an executable machine code for a platform but, this platform is not the one on which the compiler is running.

☐ Bootstrap compilers: These compilers are written in a programming language that they have to compile.

Ans to the Ques.No-1(b)

Advantages of compiler :-

① Improved performance - Compiled code tends to run faster than interpreted code because it has been translated into machine code that can be directly executed by the computer processor. This can be particularly important for performance-critical applications, such as scientific simulations on real time systems.

② Portability - Compilers allow programmers to write code in a high-level programming language that can be easily translated into machine code for a variety of different platforms.

Disadvantages of compiler :-

① Compilation time :- Depending on the size and complexity of the source code, compilation can take a significant amount of time.

This can be a hindrance to productivity if frequent updates to the code are required.

② Portability - Programs compiled for a specific platform or architecture may not be able to run on other platforms or architectures without being recompiled.

Ans to the Ques. No-1(c)

Bottom-up parsers, such as LR parsers, can handle left-recursive grammars and can efficiently parse ambiguous grammars. Top down parsing, on the other hand, is typically used for simpler grammars and is easier to implement.

In the world of software, every different entity has its criteria for the data to be processed. So parsing is the process that transforms the data in such a way so that it can be understood by any specific software.

Bottom up parsing has the following advantages over top-down parsing. Attribute computation is easy. Since choices are made only at the end of a rule, shared prefixes are unproblematic. Because of this, there is usually no need to modify grammar rules.

Ans to the Ques.No-2(a)

In language processing system the source program is first preprocessed by preprocessor. The modified source program is processed by compiler to form target assembly code which is then translated by assembler to generate relocatable object codes that are processed by linker.

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.

A program that translates instructions from a high-level language on one computer to the machine language of another computer - the one on which the program is to be run

Ans to the Ques.No-2(c)

Source code is generally understood to mean programming statements that are created by a programmer with a text editor or a visual programming tool and then saved in a file.