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REG NO: SCT222-0161/2023.

1. DEFINE THE FOLLOWING TERMS AS USED IN C PROGRAMMING.

a, COMPILER-

A compiler is a software that translates the source code written in the c programming language into machine code or binary code so that the computer’s hardware can directly execute the program.

b, SOURCE CODE-

It is the “human-readable” version of a computer program written in a programming language for example a source code can be written in the C programming language.

c, OBJECT CODE-

Object code is the output after compilation process has taken place. So when one compiles a C program the compiler translates the source code into object code.

d, LINKERS-

Linkers are utility programs that link together the compiled object code to help in the effectiveness when executing the final program.

1. USING AN EXAMPLE (I.E A PROGRAM TO ADD TWO NUMBERS) EXPLAIN THE COMPILATION PROCESS OF A C PROGRAM.

So the source code (which is the code written in c language to add two numbers) is compiled into the object code. The linkers then link together the object code, together with any necessary libraries to create the final executable program. Then the resulting program is ready for execution producing the desired output when run.

1. EXPLAIN THE DIFFERENCE BETWEEN COMPILER AND INTERFACE.

PURPOSE

1. A compiler translates high-level source code into machine code for execution while interface serves as a point of interaction between different software components, systems, or users.

FUNCTIONALITY

1. Compiler converts entire source code into an executable program, handling syntax checking, optimization and code generation while interface defines how different software components communicate or how users interact with a system through graphical or command-line interfaces.

OUTPUT

1. Compiler produces executable files that can be executed by a computer while interfaces do not produce standalone executables but facilitates communication or interaction.

USAGE

1. Compiler are used in the developing process of creating executable programs from source code while interface are used to enable interaction between different software components or between users and applications.

SCOPE

1. Compiler deals with the entire translation and compilation process of a programming language while interface can refer to various types of interfaces, including user interfaces and software component interfaces, each serving interaction purposes.
2. Examples of compilers include GCC, Clang, Microsoft visual c++ compiler while interface examples include user interface (e.g. graphical user interface, command-line interfaces), APIs, (e.g.; windows API, POSIX API).
3. LIST ALL THE MAIN CATEGORIES OF OPERATORS AVAILABLE IN C PROGRAMMING.

* Arithmetic operations
* Relation operations
* Logical operations
* Bitwise operations
* Assignment operations
* Increment and decrement operations
* Conditional (Ternary) operator
* Miscellaneous operations