

RESEARCH WORK -2

1. What are Translators in programming languages?

A Translator is a software tool that converts the source code written in one programming language into a different form that can be executed by a computer.

2. What Assembler?

An assembler is a type of translator software tool that converts assembly language code into machine code. Assembly language is a low-level programming language that uses mnemonic instructions and symbolic computer representation of computer operations. Assemblers typically have a one-to-one mapping between assembly instructions and machine instructions.

3. What is Compiler?

A Compiler is a translator that converts the entire source code into machine code or an executable program. It performs various tasks like lexical analysis, syntax analysis, semantic analysis, optimization, and code generation. Compilers are commonly used in languages like C, C++, Java, and others.

4. What is Interpreter?

An interpreter translates the source code line by line while executing it directly. It reads each instruction, converts it into machine code, and executes it immediately. Interpreters are often used in scripting languages like Python, JavaScript, and Ruby. They are generally slower than compilers because they perform the translation and execution steps simultaneously.

5. What are IDE's?

IDE stands for Integrated Development Environment. It is a software application that provides comprehensive tools and features to facilitate software development. IDEs are designed to streamline the development process by providing an all-in-one solution for coding, debugging, compiling, and deploying applications.

6. Examples for IDE's or Compilers for C programming

IDE's:

- Microsoft Visual Studio

- Eclipse
- Code Block
- CLion

Compiler:

- GCC (GNU Compiler Collection)
- LLVM Clang
- Intel C++ Compiler
- TinyCC (TCC)