1.Define the terms

1. Compiler-A special program that translates a programming language’s source code into machine code or any another programming language.
2. Source code-it’s a set of instructions and statements written by a programmer using a computer programming language.
3. Object code-is a set of instructions code that is understood by a computer at the lowest hardware language.
4. Link as-is a digital reference to data that the user can follow or be guided to by clicking or tapping

2.Using an example i.e a program to add two numbers .Explain the compilation process of a C program

The process has four steps which are:

1. Preprocessor-The source code is first passed to the processor and then the processor expands this code the expanded code is passed to the compiler.
2. Compiler-The compiler converts this code into assembly code.
3. Assembler-The assembly code is converted into object code by the assembler
4. Linker-The main purpose of the linker is to combine the object code of library files with the object code of our program the output of the linker is the executable file.

4. Explain the difference between a compiler and an interpreter

|  |  |
| --- | --- |
| COMPILER | INTERPRETER |
| a)It display all errors after compilation | a)It displays errors of each line one by one |
| b)takes an entire program | b) takes a single line of code |
| c)Generates object code which further requires linking hence requires more memory | c)No object code is generated hence are memory efficient. |
| d)Programming language like C , C++ ,Java use compilers | d) programming language like javascript, python ruby use it |
| e)Object code is permanently saved for future use | e)No object code is saved for future use. |
| f)It does not require source code for later execution | F)it requires source code fore later execution. |

5.list all main categories available in c programming language

1. Relational operator- (<,<=,>,>=,==,!=)
2. Unery operator- (++,--)
3. Bitwise operator-(&,|,<<,>>,~)
4. Logical operator-&&,||,!
5. Assignment operator-(=,+=,-=,\*=,/=,%=)
6. Ternery/ Conditional operator-