1. Define the following terms as used in C programming?
2. **Compiler**

A compiler is a tool that translates human readable code to machine form.

1. **Source code**

It is a language that is not yet translated into machine form, i.e., it is still in human readable form.

1. **Linkers**

A tool used for combining multiple files to produce a single executable program.

1. **Object code**

A language that is in machine readable form. i.e., it is already translated.

1. Explain the difference between a compiler and an interpreter?

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| **Compiler** | | **Interpreter** |
| 1. | Translates the entire source code at once. | Translates the source code line by line. |
| 2. | Faster execution. | Tends to be slower in execution. |
| 3. | Detects errors in the entire code which makes debugging more challenging. | Identifies errors one by one as it encounters them making it easier to debug. |
| 4. | Less portable. | More portable since it can adapt to different platforms without completion. |
| 5. | Consumes more memory. | Consumes less memory. |
| 6. | Generates a separate executable file. | Executes the code directly without a separate executable providing intermediate results. |

1. list all the main categories operators available in C programming and the specific operators under each category.
2. **Arithmetic operators:**

* **,+ ,/ ,%**

1. **Relational operators**

=,1=, <,>,>=, <=

1. **Assignment operators**

* Assignment (=)
* Addition and assignment (+=)
* subtraction and assignment (-=)

1. **logical operators**

* logical AND (&&)
* logical OR (||)
* logical NOT(!)

1. increment and decrement operators

* increment (++)
* decrement(--)