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1) Explain the term "programming".

→ A set of instructions for computer to perform specific tasks and solve problems.

→ Programming impacts your world in countless ways:

→ from the websites you visit,

→ the apps you use,

→ to the games you play and

→ the AI assistants you interact with.

→ Steps in programming

1 Problem Definition

2 Algorithm design

3 coding

4 compilation/interpretation

5 Testing

6 debugging

7 documentation

8 maintenance

2. Describe the history and importance of C++.

History

- C++ Programming language was developed in 1979 by Bjarne Stroustrup at Bell Laboratories of AT & T (American Telephone & Telegraph), located in U.S.A.
- Bjarne Stroustrup is known as the Founder of C++ language.
- it was developed for adding a feature of OOP (Object Oriented Programming) in C language.
- C++ Programming is "relative" (called a superset) of C, it means any valid C program is also a valid C++ program.

Importance :-

- C++ is a powerful and versatile language with a central role in various industries.
- its performance, versatility, and established community make it a valuable skill for programmers and push the boundaries of software development.

- 1 - performance and efficiency
- 2 - versatility and general-purpose nature
- 3 - object-oriented programming (oop) support
- 4 - large and active community.
- 5 - legacy coverage and compatibility
- 6 - low-level language.

3. Note the difference between compiler and interpreter

comparison	compiler	interpreter
input	it takes an entire program at a time	it takes a single line of code or instruction at a time.
output	it generates intermediate object code.	it does not produce any intermediate object code.
working mechanism	the compilation is done before execution	compilation and execution take place simultaneously
speed	comparatively faster	slower
memory	require more memory	require less memory
errors.	display all error	display one by one
detection	difficult	easier comparatively
example.	C, C++, C#, scala, typescript, we compiler	PHP, python, ruby, we an interpreter