Agenda

- Limitations of C
- History
- OOP Concepts
- Data types in CPP
- Structure in C and CPP
- Access Specifiers in Structure
- NameSpace
- Cin,Cout

Limitations of C

- It is a POP(Procedure Oriented Programming) Language
- It does not have any security for the data
- It becomes too complex to maintain the code when the size of the code increases

History

- It is developed by Bjarne Stroustrup in 1979
- It was initially called as C with classes
- It wasa renamed later by ANSI to C++ or CPP

OOP(Object Oriented Programming) Concepts

- Abstraction, Encapsulation,Hirerachy,Polymorphism

- Major Pillar

  - Abstration
  - Encapsualtion
  - Modularity
  - Hirerachy (Inheritance)

- Minor Pillar

  - Typing/Polymorphism
  - Persistance
  - Concurrency

- All the major pillars must be followd by the language that terms it is an oop language

Abstraction

- Knowing only essestial things.

Encapsulation

- Binding the data and code together.

Modularity

- Dividing the entire code into multiple modules/files/functions

Hirerachy

- writing classes and extending them is inheritance

Polymorphism

- One entity taking multiple forms
- two types of polymorphism
  - 1. Compile time
  - 2. Runtime

Persistance

- To persist/save the data

Concurrency

- Concurrent Execution

Helo world(demo.cpp)

1. inclued the header file iostream
2. write the main as it is like c
3. use the printf from c as it is supported in cpp
4. to compile and execute the code use the command
   - g++
   - a.exe

Data types in CPP (demo01.cpp)

- bool

- wchar_t

Structure in C (dmeo02.c)

Structure in CPP (demo02.cpp)

Access Specifiers in structure in cpp (demo02.cpp)

- private
- public
- By default the members of the structure are public

NameSpace (demo03.cpp to demo06.cpp)

- It is just a container that keeps the code binded
- It can contain a variable,function,classes, structor

Scope Resolution Operaator (::)

cin (demo07.cpp)

- It is an object of Istream class
- Extraction operator (>>)

cout (demo07.cpp)

- It is an object of Ostream class
- Insertion Operator(<<)