C++

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Topics to be discussed

- Functions
  - Definition
  - Function call
    - Pass by value
    - Pass by refernce
  - Recursion
  - Overloading functions : polymorphism

definition

- Syntax: Return_type function_name(arguments_list){

  Body of the function

  }
- Return_type:
  - Value
  - Address
- Arguments_list:
  - Value
  - Address

Function call

- Have to call with same syntax of definition
- Control transfer to called function
- It perform the defined task and returns to from where it called
- Pass by value : passes the value of the variable
- Pass by reference : passes the address of the variable
- C++ supports function overloading

Recursion

- Function that calls itself
- Mathematic: factorial, fibonacci
- Searching and sorting
- Eg: factorial
  - n! = n * (n-1)! Base case: 0! = 1
- Base cases terminates the recursion
- If recursion doesn’t stop you will have infinite recursion

Overloading functions

- Functions having same name but with different parameters list
- Type of polymorphism
- Compiler will identify the functions based on the parameters list and argument list
  - int total(int a, int b)
  - float total(float a, float b)
  - double total(double a, double b)
- Static binding

Doubts

Q&A

End of the session

Thank You