FUNCTIONS

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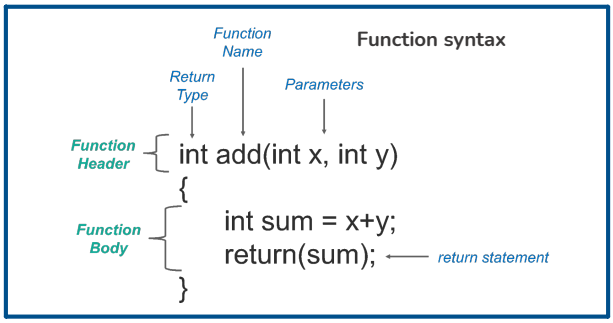
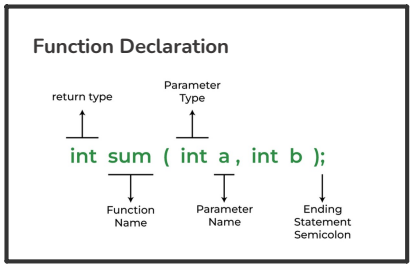
class : 6th — 04/09/23

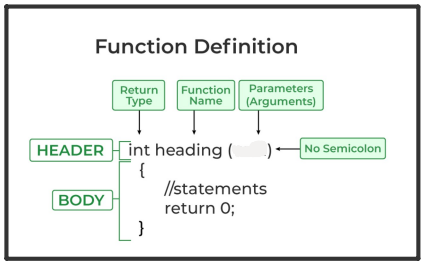
https://www.linkedin.com/in/manojoffcialmj/

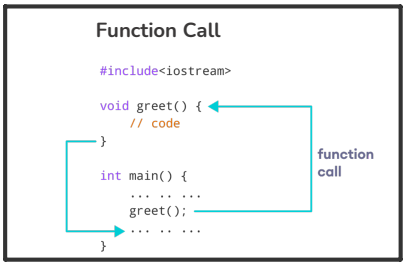
Function : A block of code or sub-program that is linked to a well-defined task is called a function.

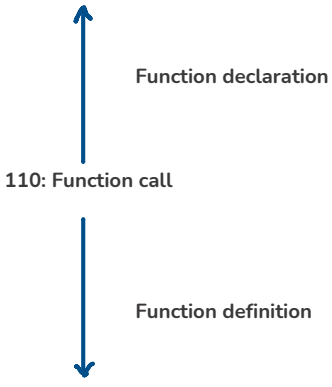
Why use : Readability and reusability. And avoid the bulky and buggy code.

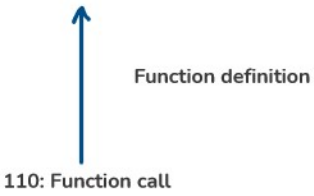






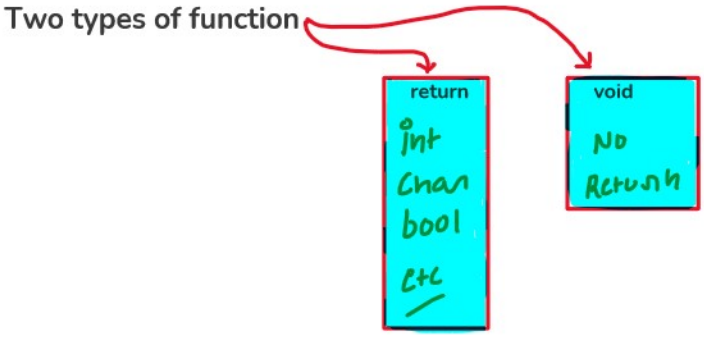







```cpp
#include <iostream>
using namespace std;

void greet(){ // Function definition
    cout<<"Hii";
}

int main() {

    greet(); // Function call
    return 0;
}

// OUTPUT: Hii
```

way:2




```cpp
// Program #2: Write a function to return sum of 3 numbers
#include<iostream>
using namespace std;

// Function to return sum of three number
int sum(int num1, int num2, int num3){
    int result = num1+num2+num3;
    return result;
}

// main function
int main(){

    // function call
    int finalResult=sum(2,3,4);
    cout<<"Sum is "<<finalResult<<endl;

    return 0;
}

/*
OUTPUT:
Sum is 9
*/
```

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return

```cpp
// Program #1: Write a function to print sum of 3 numbers
#include<iostream>
using namespace std;

// Function to print sum of three number
void sum(int num1, int num2, int num3){
    int result = num1+num2+num3;
    cout<<"Sum is "<<result<<endl;
}

// main function
int main(){

    // function call
    sum(2,3,4);

    return 0;
}

/*
OUTPUT:
Sum is 9
*/
```

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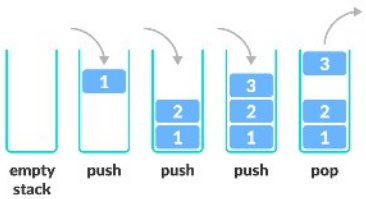
void

Function call stack

Function call stack tracking information like

1. function call
2. name
3. arguments/inputs
4. local variables
5. return value
6. which function called which function



LIFO: Last in First out

```cpp
#include<iostream>
using namespace std;

// printA function
void printA(){
    cout<<"Inside A"<<endl;
    cout<<"Going back to main"<<endl;
}

// main function
int main(){
    cout<<"Inside main"<<endl;
    // function call
    printA();
    cout<<"Back in main"<<endl;

    return 0;
}

/*
OUTPUT:
Inside main
Inside A
Going back to main
Back in main
*/
```

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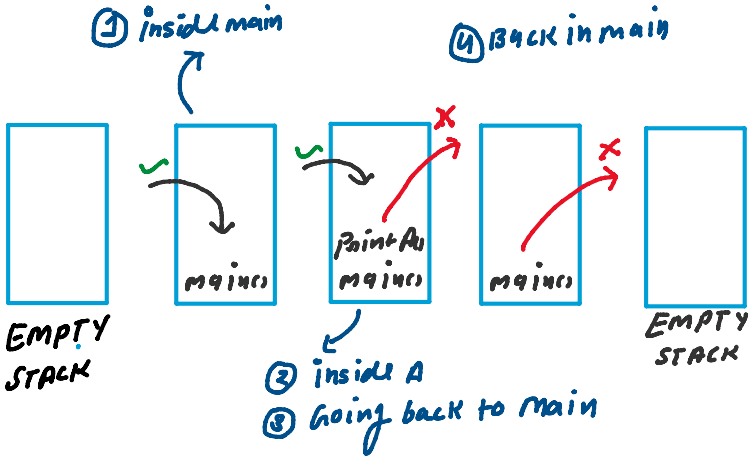

ALL PROGRAMS ARE IN GitHub REPOSITORY

CLASS PROGRAM

1. *Write a function to print sum of 3 numbers*
2. *Write a function to return sum of 3 numbers*
3. *Find maximum of three numbers*
4. *Counting from 1 to n*
5. *Check prime or not prime number*
6. *Check number is even or odd*
7. *Sum of all numbers upto 1 to N*
8. *Sum of all even numbers upto 1 to n*

HOMEWORK PROGRAM

1. *Function to find area of circle*
2. *Function to find factorial of a number*
3. *Print all prime numbers from 1 to N*
4. *Print all digits of an integer*
5. *Creating a number using digits*
6. *Print binary representation of a decimal number*
7. *Convert KM into Miles*
8. *Convert Farenheit to Celcius*
9. *Count all set bits of a number*
10. *Check even/odd using bitwise operator*

Programs Explanation are Added in HW PDF

Thanks
MANOJ KUMAR