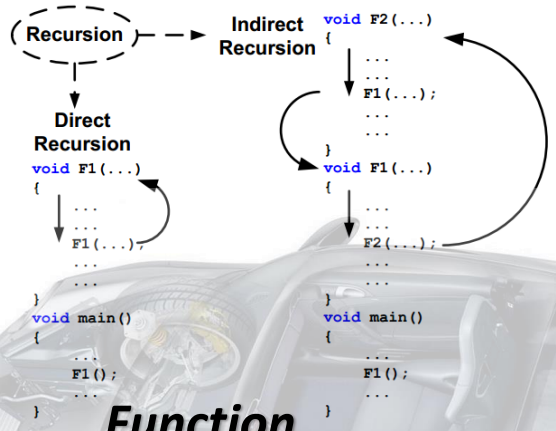
Functions

Recursion



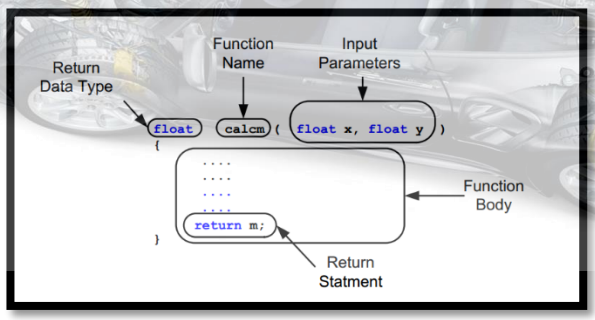
Pass by value

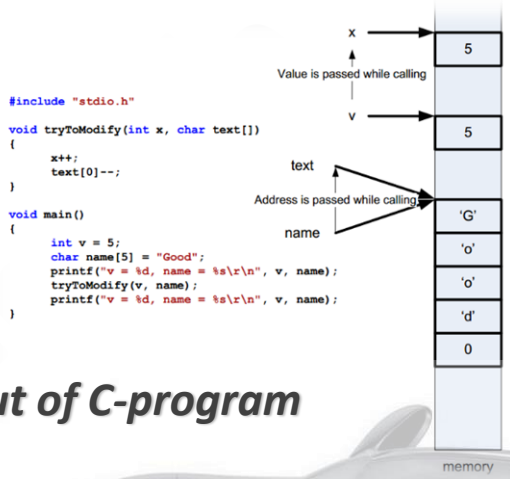
This method copies **the actual value** of an argument into the formal parameter of the function. In this case, changes made to the parameter inside the function have no effect on the argument.

Pass by reference

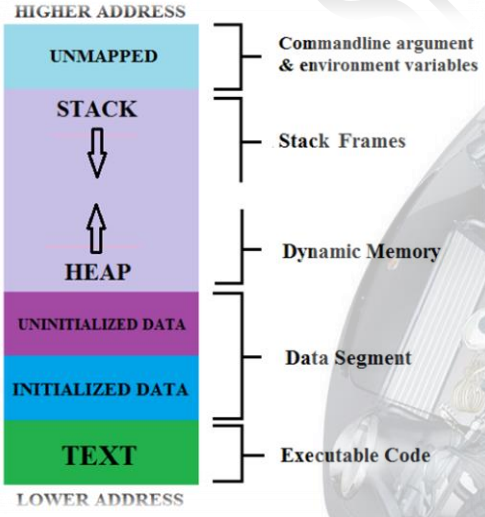
This method copies **the address** of an argument into the formal parameter. Inside the function, the address is used to access the actual argument used in the call. This means that changes made to the parameter affect the argument.

Function Definition





Memory layout of C-program



Prototype

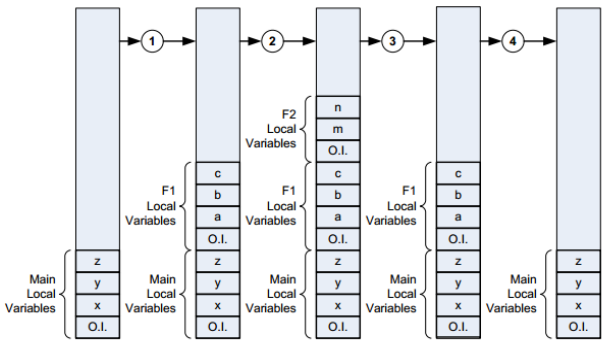
```c
#include <stdio.h>

int addNumbers(int a, int b);

int main()
{
    ... .. ...

    sum = addNumbers(n1, n2);

    ... .. ...
}

int addNumbers(int a, int b)
{
    ... .. ...
    ... .. ...
}
```

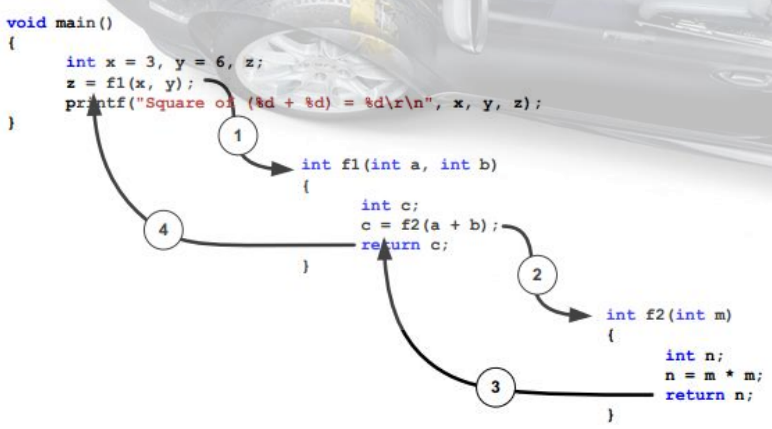
Local variables

Dynamic Allocation (malloc,..

Static And global

Stack Calling Mechanism





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