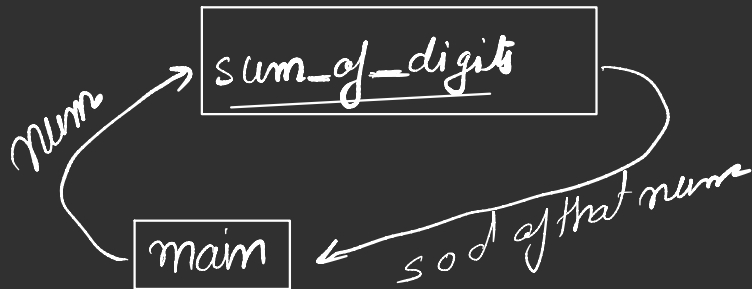


L6 Functions

For Discord email - support@learnyard.com

What are Functions ?

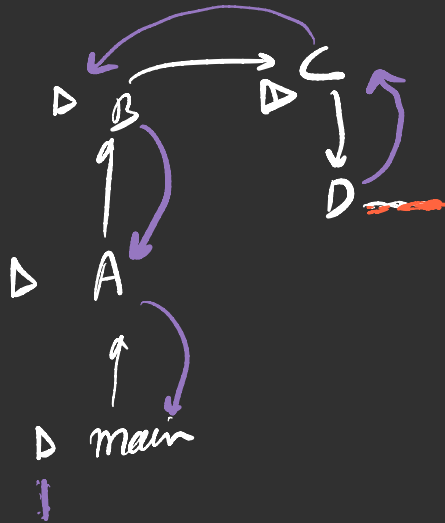
functionality



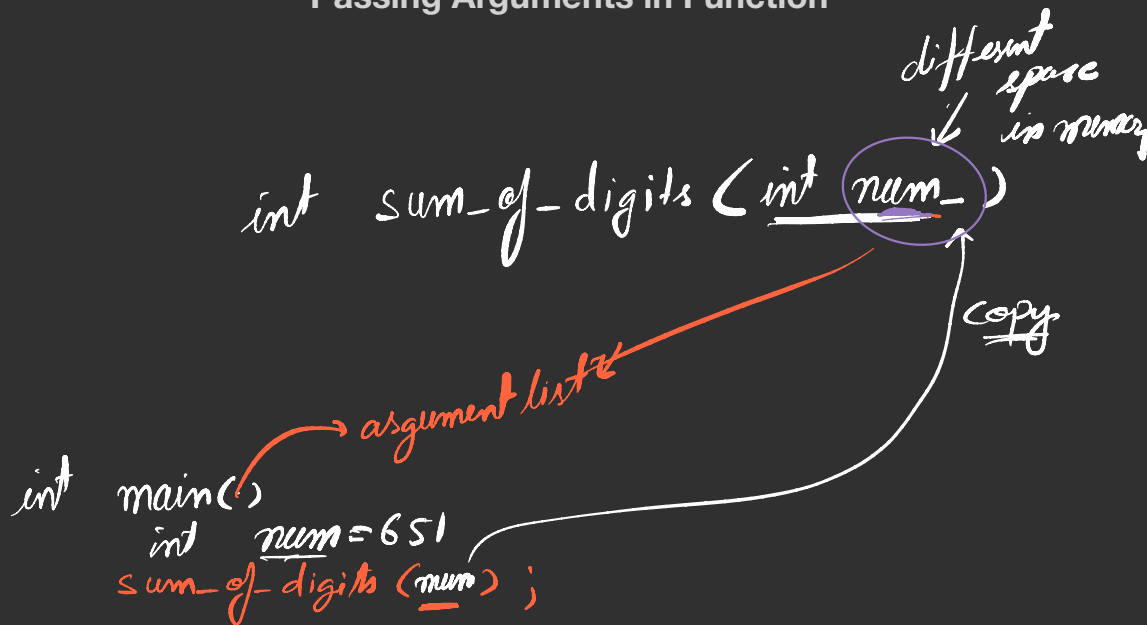
Use-case of Functions

Different Aspect of Functions

→ main() →
├→ sum-of-digits
└→ prod-of-digits



Passing Arguments in Function



Sum of number using Functions

Even odd number using Functions

Understand how to submit questions on Leetcode

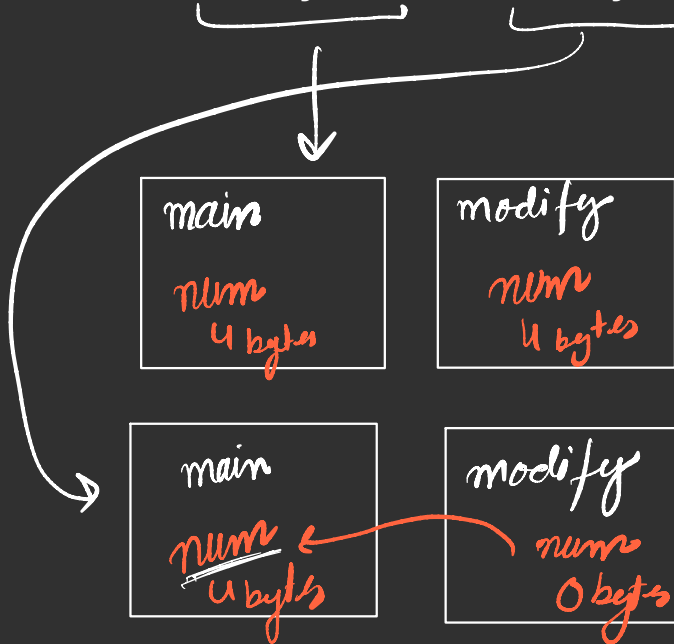
We have to complete functions on leetcode

Scope of Variables in Function

```
int sum_of_digits(int num) {  
    ...  
}  
int main() {  
    int num;  
    ...  
}
```

The diagram illustrates the scope of variables in a C program. It shows two functions: `sum_of_digits` and `main`. The variable `num` is declared inside the `main` function. A red bracket groups the `sum_of_digits` function, and a white bracket groups the `main` function. An arrow points from the `int num;` declaration in `main` to the 'X' mark, indicating that the variable `num` is not visible outside its function scope.

Pass by Value and Pass by Reference in Function



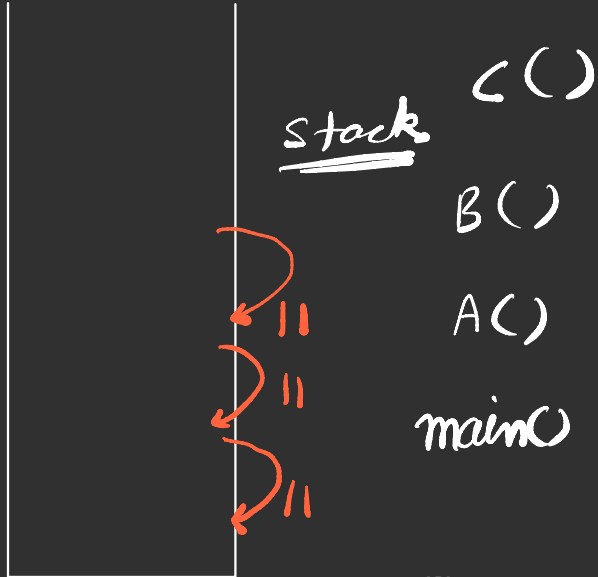
References

```
int a;  
int kb = a;  
cout << a;  
cout << b;
```

Call stack working in Function

```
int C() {  
}  
int B() {  
    → C();  
}  
int A() {  
    → B();  
}  
int main() {  
    A();  
}
```

LIFO



```

    AC) {
        AC).
    }
    main()
    AC)

```

```

    }
    D A
    D A
    D A
    D A
    D main

```

Can we write function inside another function ?

Extra question [Armstrong using Function]

146

$1^3 + 4^3 + 6^3$

$1 + 64 + 216$

$\begin{array}{r} 3 \\ 36 \\ \times 6 \\ \hline 216 \end{array}$

1 5 3

num-of-digit

power

$$1^3 + 5^3 + 3^3$$

sum-of-powers-of-digits()

$$1 + 125 + 27$$

125

27

153

main

Practice and Homework Questions

Homework questions -

<https://codeforwin.org/c-programming/c-program-to-find-maximum-and-minimum-using-functions>

<https://codeforwin.org/c-programming/c-program-to-find-prime-numbers-between-two-intervals-using-function>

<https://codeforwin.org/c-programming/c-program-to-print-armstrong-numbers-between-1-to-n-using-function>

Thank You!

Please practice more questions and examples as above !!

