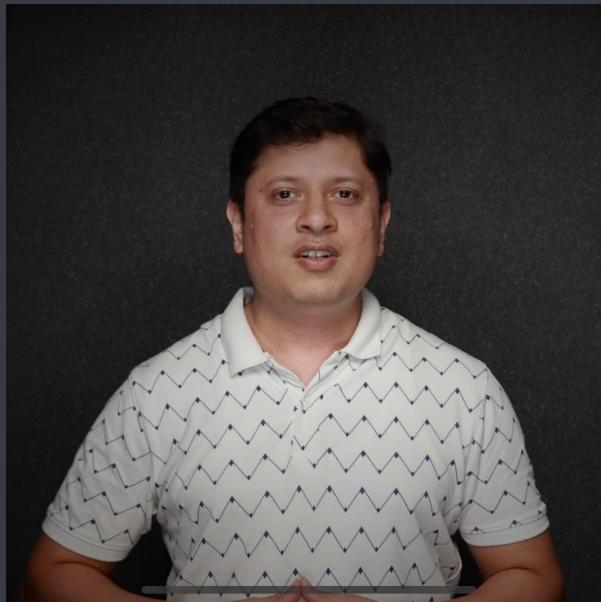


# C Language

## Function



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# Agenda

- ① Ways to define a function
- ② Header files and Library files

## Ways to define a function

1. Takes Nothing, Returns Nothing
2. Take something, Returns Nothing
3. Takes Nothing, Return Something
4. Take something, Return Something

```
f1() {  
    int a; ← local variable  
    f2();  
}  
  
3  
  
f2() {  
    int b; ← local variable  
}  
4
```

```
#include <stdio.h>
void add();
int main()
{
    add();
    return 0;
}
void add()
{
    int a,b,c;
    printf("Enter two numbers");
    scanf("%d %d", &a, &b);
    c=a+b;
    printf("sum is %d", c);
}
```

T N R N

function declaration | function prototype

Return type  
(Datatype of returned value)

function call

No return Keyword → RN

function definition

```
#include<stdio.h> TSRN
void add(int ,int );
int main()
{
    int x=3, y=4;
    add(x, y); Actual  
Arguments(parameters)
    return 0;
}
```

```
void add(int a, int b)
{
    int c; ↑  
formal Arguments
    c=a+b;
    printf("sum is %.d", c);
}
```

```
#include <stdio.h> T N RS
int add();
int main()
{
    int s;
    s = add();
    printf("sum is %d", s);
    return 0;
}

int add()
{
    int a, b, c;
    printf("Enter two numbers");
    scanf("%d %d", &a, &b);
    c = a + b;
    return c;
}
```

return  
① value return  
値を返す  
② control return  
制御を返す

You can return  
only one value

```
#include<stdio.h> TSRS
int add(int, int);
int main()
{
    int x=3, y=4, s;
    s = add(x, y); 
    printf("sum is %d", s);
    return 0;
}
```

```
}

int add (int a,int b)
{
    int c;
    c=a+b;
    return c;
}
```

Definition of predefined function

→ Library files

Declaration of predefined function

→ Header files

## Ask Yourself

1. Function call vs Function Definition vs Function Declaration
2. Function saves memory
3. main() is a userdefined function.
4. Header file vs Library file
5. When to write void?
6. When to write return?
7. Return type of main()
8. call by value
9. Function Prototype = function declaration
10. Can we call main() function()? Yes