

Anatomy of a function

Receive zero or more pieces of data (actual parameters)
Operate on the data
Potentially have a side effect
Return zero or **one** piece of data (return value)

The type of the value
the function will return

The name of
the function

The list of Formal Parameters

```
float myFunction(int x, float y, char z){  
    float val;  
    val = x * y - z;  
    return val;  
}
```

This is effectively:
declaring new variables (only visible in the function)
assigning those variables whatever VALUES were passed
to the function

The value returned by the function
(the result of evaluating the function) ₁

Anatomy of a function

- User Defined Functions - example

declaration

```
float vol(float length, float width, float height);  
...
```

```
int main(void){  
    float volume;  
    float W;  
    float L;  
    float H;  
    // enter W, L, H  
    ...
```

```
        volume = vol(L, W, H);  
        ...  
        return 0;  
    }
```

call

```
float vol(float length, float width, float height){  
    float tmp_val;  
    tmp_val = length * width * height;  
    return tmp_val;  
}
```

Actual
Parameters

Formal
Parameters

W=5
L=3
H=2
Values passed

volume = vol(3,5,2);
volume = 30

Values assigned

length = 3
width = 5
height = 2
return 30