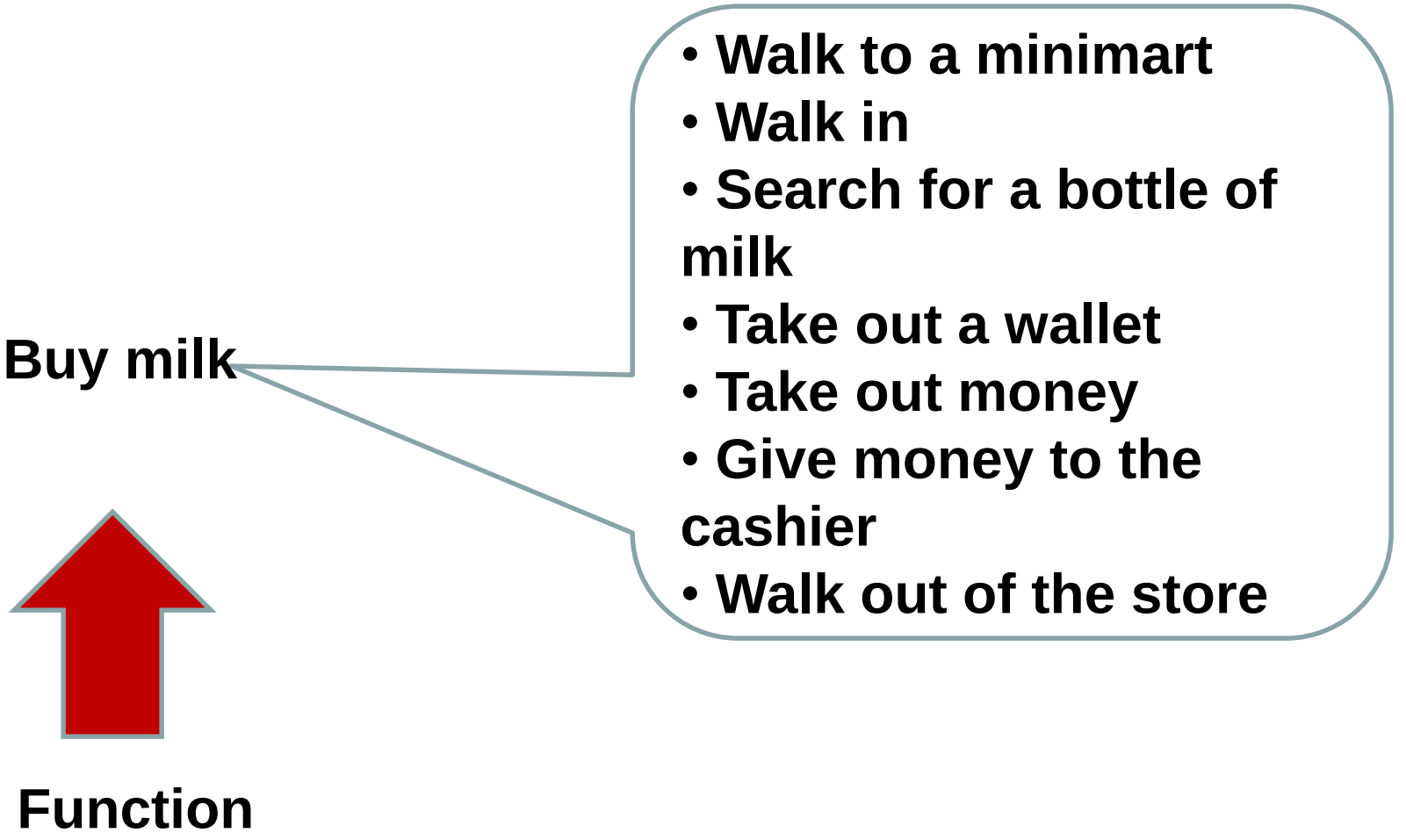
# INC 141
# Computer Programming

# Lab 8

# Learning Outcomes (Lab 8)

- Understand the mechanism of functions
- Know how to input/output of functions

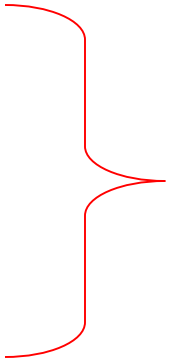
# Function is a set of collective commands.



# How to use function

```
BuyMilk()
{
        :
}


Main()
{
        :
        BuyMilk();
        :
}
```



**Function Definition**

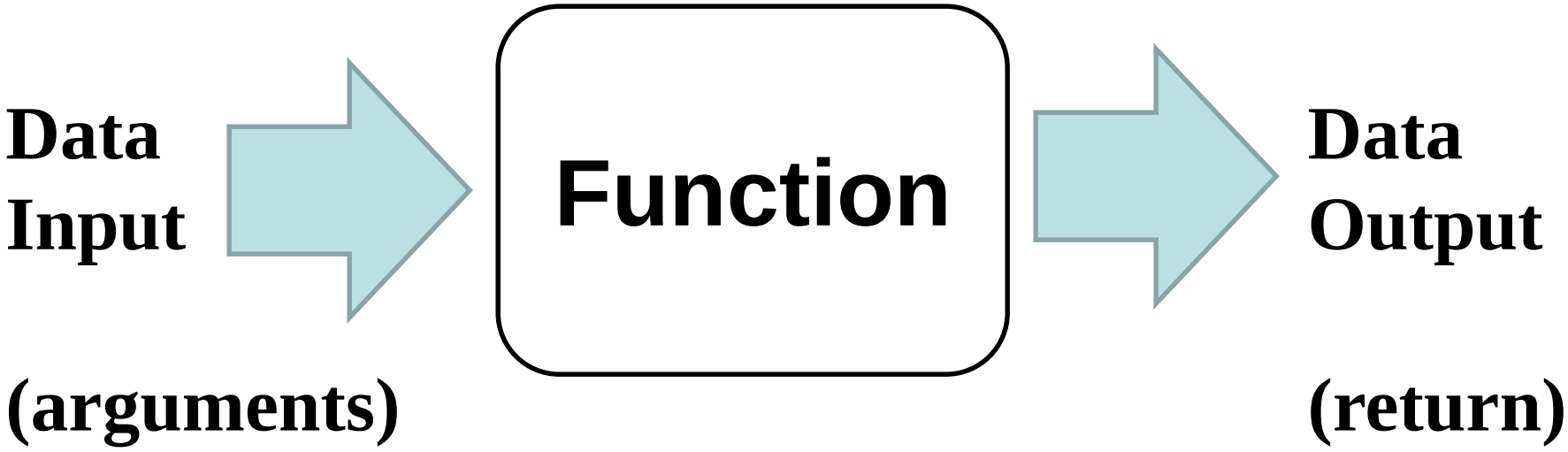
**Function call**

# Example 1

```
#include <stdio.h>

addition() {
     printf(“function\n”);
}
main() {
    addition();
    printf(“Main\n”);
    addition();
}
```

# In/Out Data of a Function




**Note: Functions can have several arguments but only one return.**

# Example 2

1 output

2 inputs

```
int addition(int a, int b) {
     int s;
     s = a + b;
     return s;
}
main() {
     int sum;
     sum = addition(3, 4);
     printf("sum = %d\n", sum);
}
```

# Task 1

**From the main() given, write a function that calculate the division of two numbers.**

```
// Write your function here

main() {
    double result;
    result = division(3, 4);
    printf("division = %lf\n", result);
}
```

**You must not change anything in main()**

# Task 2 (Upload to LEB2)

**From the main() given, write a function that print out the absolute value of a number.**

```
// Write your function here

main() {
    int num;
    printf("Enter a number: ");
    scanf("%d",&num);
    printf("Absolute = %d\n",ab(num));
}
```

**You must not change anything in main()**

# Passing an Array into a Function

```
void func(int a[10]) {
      a[0] = 1;
      a[1] = 2;
}
main() {
     int b[10];
     func(b);
}
```

**In function, can use array as usual. This makes b[0] in main() = 1 b[1] in main() = 2**

**Function call, pass array name**

# Task 3 (Upload to LEB2)

**From the main() given, write a function that find the average of the numbers in an array.**

```
// Write your function here


main() {
    float a[6] = {2,8,0,5,1,4};
    printf("Average = %f",avg(a));
}
```

**You must not change anything in main()**