

```

output type      input type, parameter
int square(int x)
{
    return x*x;
}

```

name of function

body

operation

// ; signifies the end of a statement in C

```

int main()
{
    int hypotenuse_square;
    hypotenuse_square = square(3) + square(4);
    return 0;
}

```

assignment

program executed successfully

C parses through the code line by line and checks if all variables are declared prior to use.

A variable outside a function is called a global variable

A variable encapsulated within a function is called a local variable

```
#include <math.h>
```

tells compiler you are using external libraries
(similar to import in Python/Java)

Integer representation

type	min bits/memory
char	8
short	16
int	16
long	32 - We will only use long in CS1010
long long	64

Floating point representation

type	num bits/memory
float	32
double	64 - We will only use double in CS1010

Printing

Standard I/O channels: Input - Keyboard, Output - Screen
printf, scanf

#include "cs1010.h"

Arithmetic operators

"/" will perform integer division if the divisor and dividend are integers. To circumvent this/perform floating point division, either multiply the result by 1.0 or change the type of either the dividend or divisor to a floating point number.

Use parentheses to model order of operations

→ $x < op > = y$

→ $x = x < op > y$

$++$ ~ increment by 1

$--$ ~ decrement by 1

} discouraged in CS1010