Lambda Expressions / Anonymous Functions

named function - a function with a name that can invoked from anywhere in the code accept parameters and return a value.

named function are used when you want to call the function multiple times from different place in your code.

Named function that takes 2 parameters and returns their sum:

Named function that takes no parameters and returns a 0:

```
return 0;
}
```

int giveMeAZero() {

is defined it can accept parameters and return a value
(aka arrow function or anonymous methods/functions)

Lambda Expressions are used where a function is needed in

Lambda Expression - a function without a name that can only be invoked where it

(Usually as parameters to other methods)

instead of function name you code => after the parameters and before the {

Named function that takes 2 parameters and returns their sum:

only one placed in the code.

int sum(int n1, int n2) {
 return n1 + n2;

Lambda Expression that takes 2 parameters and returns their sum:

```
int sum(int n1, int n2) {
   (int n1, int n2) => {
        return n1 + n2;
        }
}
```

Lambda Expression that takes no parameters and returns a 0:

(int n1, int n2) => return n1 + n2; // C# does not {} if a single line process

(int n1, int n2) => { return n1 + n2; } // single-line processes may be coded

// on one line

```
    () => {
        return 0;
        }
    () => { return 0; }
    Lambda Expressions are frequently used as arguments for other methods.
    Some methods require function be passed to them that they then execute as part of thier
```

// int giveMeAZero() {

function as a **callback function**.

processing. The functions that are passed are referred to a callback functions.

The method receiving the **callback function**, calls the callback function as part of it's processing.

When a function is used as a parameter to another function, we refer to the parameter

Callback methods may either named or Lambda Expressions.