

PASSING POINTERS TO FUNCTIONS IN OBJECTIVE-C

http://www.tutorialspoint.com/objective_c/objective_c_passing_pointers_to_functions.htm

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Objective-C programming language allows you to pass a pointer to a function. To do so, simply declare the function parameter as a pointer type.

Following a simple example where we pass an unsigned long pointer to a function and change the value inside the function which reflects back in the calling function:

```
#import <Foundation/Foundation.h>

@interface SampleClass:NSObject
- (void) getSeconds:(int *)par;

@end

@implementation SampleClass

- (void) getSeconds:(int *)par{
    /* get the current number of seconds */
    *par = time( NULL );
    return;
}

@end

int main ()
{
    int sec;

    SampleClass *sampleClass = [[SampleClass alloc]init];
    [sampleClass getSeconds:&sec];

    /* print the actual value */
    NSLog(@"Number of seconds: %d\n", sec );

    return 0;
}
```

When the above code is compiled and executed, it produces the following result:

```
2013-09-13 23:50:47.572 demo[319] Number of seconds: 1379141447
```

The function, which can accept a pointer, can also accept an array as shown in the following example:

```
#import <Foundation/Foundation.h>

@interface SampleClass:NSObject
/* function declaration */
- (double) getAverage:(int *)arr ofSize:(int) size;
@end

@implementation SampleClass

- (double) getAverage:(int *)arr ofSize:(int) size
{
    int i, sum = 0;
    double avg;

    for (i = 0; i < size; ++i)
    {
        sum += arr[i];
    }
}
```

```

    avg = (double)sum / size;
    return avg;
}
@end

int main ()
{
    /* an int array with 5 elements */
    int balance[5] = {1000, 2, 3, 17, 50};
    double avg;

    SampleClass *sampleClass = [[SampleClass alloc]init];
    /* pass pointer to the array as an argument */
    avg = [sampleClass getAverage: balance ofSize: 5 ] ;

    /* output the returned value */
    NSLog(@"Average value is: %f\n", avg );

    return 0;
}

```

When the above code is compiled together and executed, it produces the following result:

```

2013-09-14 00:02:21.910 demo[9641] Average value is: 214.400000

```