

RETURN POINTER FROM FUNCTIONS IN OBJECTIVE-C

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As we have seen in last chapter how Objective-C programming language allows to return an array from a function, similar way Objective-C allows you to return a pointer from a function. To do so, you would have to declare a function returning a pointer as in the following example:

```
int * myFunction()
{
.
.
.
}
```

Second point to remember is that, it is not good idea to return the address of a local variable to outside of the function so you would have to define the local variable as **static** variable.

Now, consider the following function, which will generate 10 random numbers and return them using an array name, which represents a pointer, i.e., address of first array element.

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

/* function to generate and return random numbers. */
int * getRandom( )
{
    static int r[10];
    int i;

    /* set the seed */
    srand( (unsigned)time( NULL ) );
    for ( i = 0; i < 10; ++i)
    {
        r[i] = rand();
        NSLog(@"%d\n", r[i] );
    }

    return r;
}

/* main function to call above defined function */
int main ()
{
    /* a pointer to an int */
    int *p;
    int i;

    p = getRandom();
    for ( i = 0; i < 10; i++ )
    {
        NSLog(@"*(p + [%d]) : %d\n", i, *(p + i) );
    }

    return 0;
}
```

When the above code is compiled together and executed, it produces the result something as follows:

```
2013-09-13 23:32:30.934 demo[31106] 1751348405
2013-09-13 23:32:30.934 demo[31106] 1361314626
2013-09-13 23:32:30.934 demo[31106] 833264711
2013-09-13 23:32:30.934 demo[31106] 1700550876
2013-09-13 23:32:30.934 demo[31106] 1164219218
```

```
2013-09-13 23:32:30.934 demo[31106] 1083527138
2013-09-13 23:32:30.934 demo[31106] 1465344952
2013-09-13 23:32:30.934 demo[31106] 849888001
2013-09-13 23:32:30.934 demo[31106] 1220494938
2013-09-13 23:32:30.934 demo[31106] 2095604466
2013-09-13 23:32:30.934 demo[31106] *(p + [0]) : 1751348405
2013-09-13 23:32:30.934 demo[31106] *(p + [1]) : 1361314626
2013-09-13 23:32:30.934 demo[31106] *(p + [2]) : 833264711
2013-09-13 23:32:30.934 demo[31106] *(p + [3]) : 1700550876
2013-09-13 23:32:30.934 demo[31106] *(p + [4]) : 1164219218
2013-09-13 23:32:30.934 demo[31106] *(p + [5]) : 1083527138
2013-09-13 23:32:30.934 demo[31106] *(p + [6]) : 1465344952
2013-09-13 23:32:30.934 demo[31106] *(p + [7]) : 849888001
2013-09-13 23:32:30.934 demo[31106] *(p + [8]) : 1220494938
2013-09-13 23:32:30.934 demo[31106] *(p + [9]) : 2095604466
```