

PASSING POINTERS TO FUNCTIONS IN C

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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:

```
#include <stdio.h>
#include <time.h>

void getSeconds(unsigned long *par);

int main ()
{
    unsigned long sec;

    getSeconds( &sec );

    /* print the actual value */
    printf("Number of seconds: %ld\n", sec );

    return 0;
}

void getSeconds(unsigned long *par)
{
    /* get the current number of seconds */
    *par = time( NULL );
    return;
}
```

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

```
Number of seconds :1294450468
```

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

```
#include <stdio.h>

/* function declaration */
double getAverage(int *arr, int size);

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

    /* pass pointer to the array as an argument */
    avg = getAverage( balance, 5 );

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

    return 0;
}

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

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

avg = (double)sum / size;

return avg;
}
```

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

```
Average value is: 214.40000
```