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Thread: [C++ entering numbers and displaying](#)

dawid17 - October 17, 2020, 5:08 am

So I got this code, I input three numbers. Now I want to display them in a for loop. From smallest to biggest, and in another loop from biggest to smallest. How can I do this?

Code

```
int main() {
```

```
    int num1, num2, num3;
    cout << "Enter first num" << endl;
    cin >> num1;
```

```
    cout << "Enter second num" << endl;
    cin >> num2;
```

```
    cout << "Enter third num" << endl;
    cin >> num3;
```

I have done this like this but I think it's not a proper way to do it?

```
Code for(int i=0; i<=0; i++) {
    cout << num1 << num2 << num3;

}
```

```
for(int i=0; i<=0; i++) {
    cout << num3 << num2 << num1;

}
```

saltycracker - October 17, 2020, 5:22 am

Well you'll have to decide how you want to sort these integers. You can use a old fashion array or a C++ container or even recursion.

Its really up to you.

The easiest is qsort and arrays.

https://www.tutorialspoint.com/c_standard_library/c_function_qsort.htm

A not so easy way is to create an array of integer pointers to the integers and sort the pointers(smallest to largest or largest to smallest).

Here's a solution which uses an array of pointers to the integers...

```
Code #include <iostream>
#include <cstdlib>
```

```
int cmpfunc (const void * a, const void * b) {
```

```

    return ( **(int**)a - **(int**)b);
}

int main () {
    int a, b, c, d, e;

    int *arr[5] = {&a, &b, &c, &d, &e};

    std::cout << "Enter five numbers" << std::endl;
    std::cin >> a >> b >> c >> d >> e;

    std::cout << "Before sorting the list is:" << std::endl;
    for(int n = 0 ; n < 5; n++ ) {
        std::cout << *arr[n] << " ";
    }

    qsort(arr, 5, sizeof(int*), cmpfunc);

    std::cout << "\nAfter sorting the list is" << std::endl;
    for(int n = 0 ; n < 5; n++ ) {
        std::cout << *arr[n] << " ";
    }

    std::cout << "\n" << std::endl;

    return(0);
}

```

How about one that uses a C++ set?

```

Code #include <iostream>
#include <set>

int main() {
    int a, b, c, d, e;
    std::set<int> intSet;
    std::set<int>::iterator it;
    std::set<int>::reverse_iterator rit;

    std::cout << "Enter five integers: ";
    std::cin >> a >> b >> c >> d >> e;

    intSet.insert(a);
    intSet.insert(b);
    intSet.insert(c);
    intSet.insert(d);
    intSet.insert(e);

    for (it=intSet.begin(); it!=intSet.end(); ++it)
        std::cout << ' ' << *it;
    std::cout << '\n';

    for (rit=intSet.rbegin(); rit!=intSet.rend(); ++rit)
        std::cout << ' ' << *rit;
}

```

```
std::cout << '\n';
```

```
return 0;  
}
```