

```
//File: LB05_1.cpp
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//Date: 2/4/2020
//Compiler used: MS Visual Studio 2017
//Purposes: To sort 3 integers
```

```
#include <iostream>
#include <cmath>
using namespace std;
```

```
#define prog 2
```

```
#if prog == 1
```

```
int main()
```

```
{
```

```
    double a = 0.0;
```

```
    double b = 0.0;
```

```
    double c = 0.0;
```

```
    cout << "Enter a, b, c: ";
```

```
    cin >> a >> b >> c;
```

```
    if (a < b && a < c && b < c)
```

```
    {
```

```
        cout << a << ' ' << b << ' ' << c << endl;
```

```
    }
```

```
    else if (a < b && a < c && b > c)
```

```
    {
```

```
        cout << a << ' ' << c << ' ' << b << endl;
```

```
    }
```

```
    else if (a < b && a > c)
```

```
    {
```

```
        cout << c << ' ' << a << ' ' << b << endl;
```

```
    }
```

```
    else if (a > b && a < c)
```

```
    {
```

```
        cout << b << ' ' << a << ' ' << c << endl;
```

```
    }
```

```
    else if (a > b && a > c && b > c)
```

```
    {
```

```
        cout << c << ' ' << b << ' ' << a << endl;
```

```
    }
```

```
    else if (a > b && a > c && b < c)
```

```
    {
```

```
        cout << b << ' ' << c << ' ' << a << endl;
```

```
    }
```

```
    return 0;
```

```
}
```

```
#elif prog == 2
```

```
int main()
```

```
{
```

```
    double a = 0.0;
```

```
    double b = 0.0;
```

```
    double c = 0.0;
```

```
    cout << "Enter a, b, c: ";
```

```
    cin >> a >> b >> c;
```

```

if (a < b)
{
    if (a < c)
    {
        if (b < c)
        {
            cout << a << ' ' << b << ' ' << c << endl; //test case 1
        }
        else
        {
            cout << a << ' ' << c << ' ' << b << endl; //test case 3
        }
    }
    else
    {
        cout << c << ' ' << a << ' ' << b << endl; // test case 4
    }
}
else
{
    if (a < c)
    {
        cout << b << ' ' << a << ' ' << c << endl; // test case 5
    }
    else
    {
        if (b > c)
        {
            cout << c << ' ' << b << ' ' << a << endl; // test case 2
        }
        else
        {
            cout << b << ' ' << c << ' ' << a << endl; // test case 6
        }
    }
}

return 0;
}
#endif

```