

Programming in C++

Overloading the << and >> Operators

```
#include <iostream> // englio.cpp -- overloaded << and >> operators
using namespace std;
```

```
class Distance {
private:
    int nFeet;
    float flnches;
public:
    Distance() : nFeet(0), flnches(0.0) { }
    Distance(int nFt, float fln) : nFeet(nFt), flnches(fln) { }

    // non-member, declaration of friend functions
    friend istream& operator >> (istream& risLHS, Distance& rdRHS);
    friend ostream& operator<< (ostream& rosLHS, Distance& rdRHS);
};
```

```
istream& operator >> (istream& risLHS, Distance& rdRHS) // definition
{
    cout << "\nEnter feet: "; risLHS >> rdRHS.nFeet;
    cout << "Enter inches: "; risLHS >> rdRHS.flnches;
    return risLHS;
}
```

```
ostream& operator<< (ostream& rosLHS, Distance& rdRHS) // definition
{
    rosLHS << rdRHS.nFeet << "\'-" << rdRHS.flnches << "\";
    return rosLHS;
}
```

```
void main()
{
    Distance dist1, dist2;
    Distance dist3(11, 6.25);

    cout << "\nEnter two Distance values:";
    cin >> dist1 >> dist2;

    cout << "\ndist1 = " << dist1 << "\ndist2 = " << dist2;
    cout << "\ndist3 = " << dist3 << endl;
}
```