

Fixed Point - Task

Phase 2: Template It

SpaceX Products are not Dollarama Ones

Our *Price* class is great, only it does not always fit our needs.

Since it uses *int*, its actual size might differ from one platform to another.

If you would like to offer your class to Elon Musk, he wouldn't be able to use it - some of his products' prices go much beyond 32bits numbers, and if he happened to run it on a 16bit processor, the result will be really embarrassing.

On the other hand, Dollarama's data center might include zillions of products, each of which is priced at around one dollar. If they use unneeded memory for all the prices, they might blow up their memory.

We would like, then, to make *Price* a **class template** rather than a class, so that Elon Musk will be able to use it with *long long* type and Dollarama with *signed char*.

Is ***long long*** a standard C++ type?

Is ***char*** (without any prefix) ***signed*** or ***unsigned***?

What will happen in the following code?

```
Price<short> mySalary(120, 35);
Price<long> myOverdraft(99999, 99);
Price<long long> useSelfDebt(1458000000000000);
myOverdraft = mySalary;
myOverdraft = useSelfDebt;
```