Object-Oriented Programmaming, Task List 9

Due: 26 May 2010

1. Using the big numbers of last weak, write a function

```
int compare( std::vector< char > nr1,
             std::vector< char > nr2 )
```

   that returns -1 if nr1 < nr2, returns 0 if nr1 == nr2 and which returns 1 if nr1 > nr2.

   (It is very similar to the `lessthan` method that I showed in class.)

2. Write a function

```
std::vector< char > subtract( std::vector< char > nr1,
                              std::vector< char > nr2 );
```

   That computes nr1 − nr2. In case nr1 < nr2, the result should be 0.

3. Write a function

```
std::vector< char > divide( std::vector< char > nr1,
                            std::vector< char > nr2 )
```

   that computes nr1 / nr2. It should use the following algorithm:

```
// Algorithm for computing z = x/y.

z = 0;
f = 1;
while( y < x )
{
   f = f * 10;
   y = y * 10;
}
```

```
while( f > 0 )
{
   while( x >= y )
   {
      x = x - y;
      z = z + f;
   }
   f = f / 10;
   y = y / 10;
}
```

Now z contains the answer.