

# Object-Oriented Programming (List 6)

Deadline: 19.04.2011

This exercise is about STL.

1. Consider the following **main** function:

```
int main( int argc, char * argv [ ] )
{
    std::list< std::string > s;
    s. push_back( "alpha" );
    s. push_back( "beta" );
    s. push_back( "gamma" );
    s. push_back( "delta" );
    // Put a few more.
}
```

2. Write a function `void bubblesort( std::list< std::string > & s )` .  
It should use `std::list< std::string > :: iterator`.
3. Write a function

```
std::ostream& operator << ( std::ostream& stream,
                           const std::list< std::string > & s );
```

Make sure to use `const::iterator`.

4. Adapt `main( )`, `bubblesort( )` and `operator <<`, so that they work for `std::vector< std::string >`. The changes should be very small.
5. Write a function

```
bool contains( const std::string& s,
              const std::list< std::string > :: const_iterator p1,
              const std::list< std::string > :: const_iterator p2 );
```

Use it to write a function `void remove_repeated( std::list< std::string > & s )`.  
It should use **contains** and use **erase** for deletion.

(See the rules for showing code on the course homepage. Default value of a task  
(when shown on time) is 3 points.)