

# Object-Oriented Programming (List 7)

Due: may 5th 2010

1. Write a function

```
bool subset( std::vector< unsigned int > s1,  
            std::vector< unsigned int > s2 );
```

that returns true if  $s_1 \subseteq s_2$ .

2. Write a function

```
std::vector< unsigned int >  
intersection( std::vector< unsigned int > s1,  
             std::vector< unsigned int > s2 );
```

that computes the intersection  $v_1 \cap v_2$  of  $v_1$  and  $v_2$ .

3. Write a function

```
std::vector< unsigned int >  
union( std::vector< unsigned int > s1,  
       std::vector< unsigned int > s2 )
```

that computes the union  $s_1 \cup s_2$  of  $s_1$  and  $s_2$ .

4. Write a function

```
std::vector< unsigned int >  
difference( std::vector< unsigned int > s1,  
           std::vector< unsigned int > s2 );
```

that computes the difference  $s_1 \setminus s_2$  of  $s_1$  and  $s_2$ .

In case you forgot:

v. size( ) : Length of vector.  
v. push\_back( i ) : Append i at the end of v.  
v. pop\_back( ) : Remove last element from vector.  
v[i] : i-th element of vector.