

Week 2

Exercise 12

../12/data/data.h

```
1  #ifndef INCLUDED_DATA_
2  #define INCLUDED_DATA_
3
4  #include <vector>
5  #include <memory>
6  #include <string>
7
8  class Data
9  {
10     typedef std::vector<std::shared_ptr<std::string>> DataVector;
11     DataVector d_data;
12
13     public:
14         typedef std::string value_type;           // Needs to be public
15         void push_back(std::string stringInput);  // Custom push_back for back_ins.
16         void print() const;                       // Just for testing
17 };
18
19 #endif
```

../12/data/data.ih

```
1  #include "data.h"
2
3  #include <iostream>
4
5  using namespace std;
```

../12/data/print.cc

```
1  #include "data.ih"
2
3  void Data::print() const
4  {
5      for (size_t idx = 0; idx != d_data.size(); ++idx)
6          cout << *d_data[idx] << '\n';
7  }
```

../12/data/push_back.cc

```
1  #include "data.ih"
2
3  void Data::push_back(string anyInput)
4  {
5      d_data.push_back( make_shared<string>(anyInput) );
6  }
```

../12/main.ih

```
1  #define ERR(msg) printf("%s : %d", (msg), __LINE__)
2
3  #include "data/data.h"
4  #include <iostream>
5  #include <iterator>
6
7  using namespace std;
```

../12/main.cc

```
1  #include "main.ih"
2
3  int main(int argc, char const **argv)
4  {
5      Data myData;
6      copy(istream_iterator<string>(cin), istream_iterator<string>(), back_inserter(
          myData));
7      myData.print();
8  }
```