CSE 333 15au Quiz 4

Name: Solution Key

1. #include <string.h>
   int main(int argc, char *argv[]) {
       char ** const * q;
       char ** const * &p = q;
       p = q;
       *p = *q;
       **p = **q;
       ***p = 'a';
       strcpy(**q, "q3");
       return 0;
   }

Circle the line(s) of code that cause(s) compile time errors, if any.

2. #include <iostream>
   #include <memory>
   using namespace std;
   int main(int argc, char **argv) {
       weak_ptr<int> w;
       {
           shared_ptr<int> x;
           {
               shared_ptr<int> y(new int(10));
               w = y;
               x = w.lock();
               cout << *x << endl;
           }
           cout << *x << endl;
       }
       shared_ptr<int> a = w.lock();
       cout << a << endl;
       return 0;
   }

If this doesn’t compile, circle a line of code that causes a compile time error and explain what the error is.
If it compiles but doesn’t run to completion without error, circle a line of code that gets a runtime error and explain what the error is.
If it compiles and runs without error, write here what it prints.

10
10
0
3. #include <iostream>
    #include <string>
    using namespace std;
    class Base {
    public:
        string go() { return "base"; }
    };
    class Sub : public Base {
    public:
        string go() { return "sub"; }
    };
    string func(Base b) {
        return b.go();
    }
    int main(int argc, char *argv[]) {
        Sub s;
        cout << func(s) << endl;
        return 0;
    }

If this doesn’t compile, circle a line of code that causes a compile time error and explain what the error is.
If it compiles but doesn’t run to completion without error, circle a line of code that gets a runtime error and explain what the error is.
If it compiles and runs without error, write here what it prints.

    base
This code compiles and runs. What does it print when invoked like this:

$ ./a.out one two three

**Vector: one two three**

./a.out one two three