Study Guide 2

What are Rvalues and Lvalues? What did the vector function do before C++11 that made it inefficient? What did C++11 change to make it more efficient and how did this make it more efficient?

Slide 3, 6

What is the syntax for the move constructor? What is the syntax for the move Assignment?

Slide 8, 10

What are the differences between the move constructor and assignment?

Slide 11

What is the main point of inheritance? What is a good example of inheritance? What is the base/parent class and derived/child/sub-class?

Slide 13-19, 20

What are differences between the access permissions between public, private, and protected? What are the symbols for public, private and protected in a UML diagram? What are the five relational operators in a UML diagram?

Slide 21, 22, 23

Learn how to draw a UML diagram for the code on slide 13-19. What does the UML diagram of an instance of the fire truck object look like?

Slide 24, 25

What is the syntax for a derived class to indicate it is extending the parent class? The private specifier means what for data members in the parent class? What would putting protected instead of private do?

Slide 28, 29

Describe the access permissions of public, private and protected. What doesn’t get inherited?

Slide 32, 37, 33

Do the memory diagram for slide 39.

Slide 40-45

What does polymorphism mean? How is it implemented in c++? How is a function overridden in c++ (its not like java)?

Slide 49, 54

What does the word ‘virtual’ mean/do in C++? What happens if a derived class does not have its own version of a function? What if there is not a meaningful version of the function in the base class-what do we do with it and what is it called? What is the difference between virtual and pure virtual? What happens if a function is pure virtual but the derived class does not have its own version of the function?

Slide 54, 55

What can an abstract class not do? How do we make an abstract class and how does this makes sense? What must the child classes do if a pure virtual function is involved in the parent class?

Slide 56

How is a virtual function represented in a UML diagram? How do you indicate a pure virtual function in a UML diagram?

Slide 59

What is the difference between function overloading and overriding? How do we write virtual functions and use them in our code? How do you indicate a pure virtual function in the parent class?

Slide 64, 61-63, 65, 66

What is function hiding? What should we do with it? What are the different ways to hide functions? If there is function hiding, how would we access the hidden functions?

Slide 66,67, 68

What is polymorphism overall used for in C++?

Slide 70