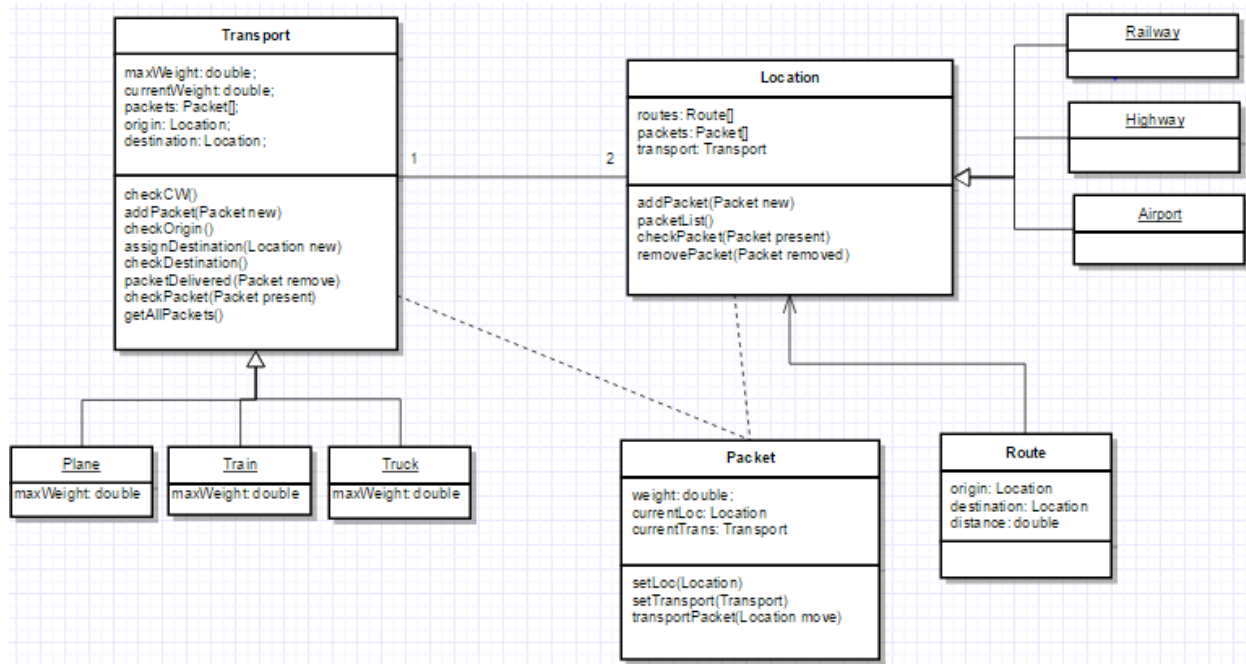


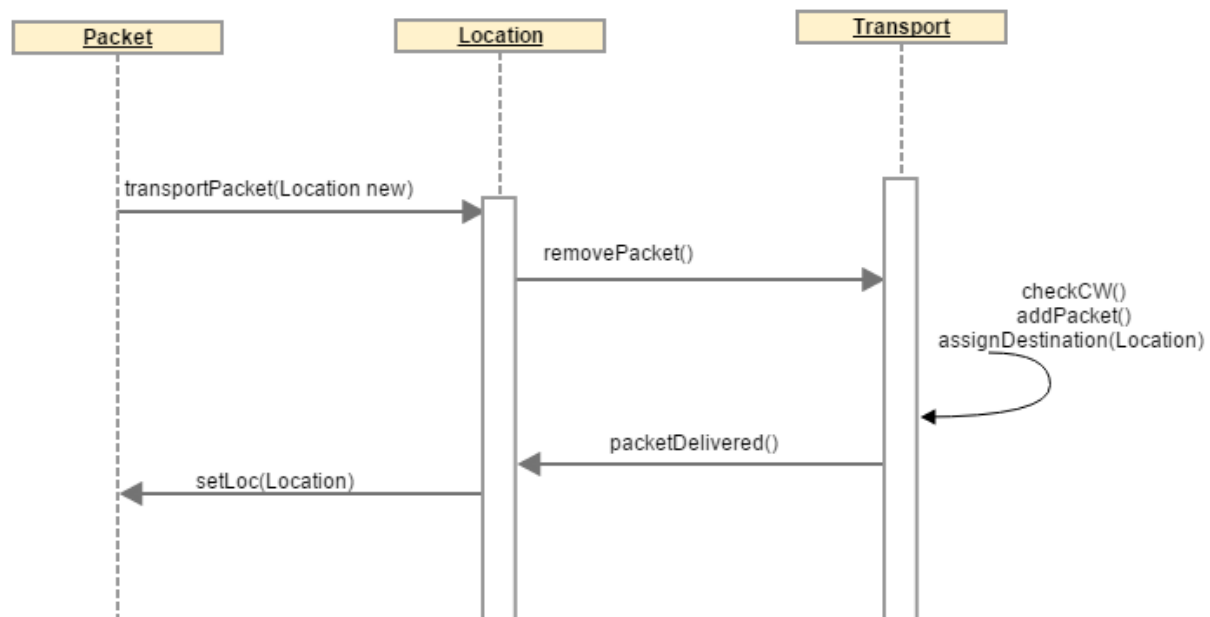
MEMO: I fully completed the assignment. I struggled with Problem 1 and had to make multiple revisions before finally having all the needed classes and methods. I also struggled with the implementation of Problem 3 because at first I was overcomplicating the problem.

Problem 1

(i)



(ii)



Problem 2

See Java Code

Lines of Code: 15

Lines of Test: NA

Coverage: NA

Complexity:

Class	OCavg	WMC
A	1	2
B		0
C	1	1
D		0
E		0
F		0
Total		3
Average	1	0.5

Problem 3

- (i) It is impossible to extend the Integer class because it declared final.
- (ii) The Integer class is like a wrapper for the primitive int type so the java compiler automatically converts the primitive type to the Integer and vice versa, known as autoboxing and unboxing respectively. If the class was to be extended the compiler would not know how to handle the autoboxing and unboxing this would either cause the code to not compile or at run time it could return incorrect value.
- (iii) The Integer class could be wrapped in a new class so that the new class would have an Instance of Integer instead of a subclass.

Problem 4

See Attached Files

Lines of Code: 5

Lines of Test: 29

Coverage:

Element	Class, %	Method, %	Line, %
ImprovedRandom	100% (1/1)	66% (2/3)	60% (3/5)
ImprovedRandomTest	100% (1/1)	100% (11/11)	100% (29/29)

Complexity:

Class	OCavg	WMC
ImprovedRandom	1	3
ImprovedRandomTest	1	10
Total		13
Average	1	6.5

Problem 5

See Attached Files

Lines of Code: 11

Lines of Test: 10

Coverage:

Element	Class, %	Method, %	Line, %
ImprovedStringTokenizer	100% (1/1)	50% (2/4)	63% (7/11)
ImprovedStringTokenizerTest	100% (1/1)	100% (3/3)	100% (10/10)

Complexity:

Class	OCavg	WMC
ImprovedStringTokenizer	1.25	5
ImprovedStringTokenizerTest	1	2
Total		7
Average	1	3.5