



OCTOBER 27, 2014


FINAL REPORT

FROM OCT. 20 2014 – Nov.17 2014

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SE450

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CLASS DIAGRAMS FOR EACH PACKAGE

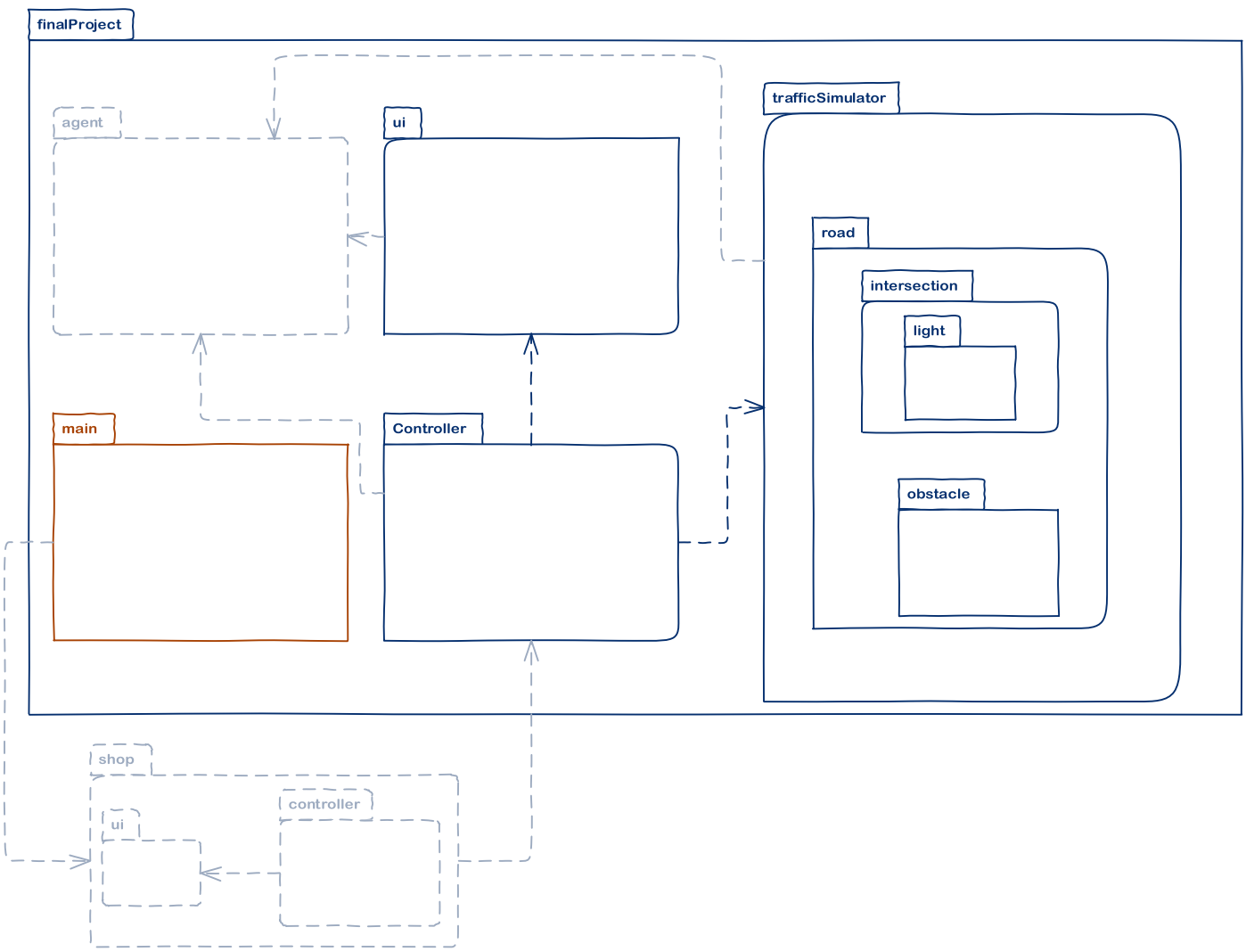


FIGURE 1. PACKAGE DIAGRAM

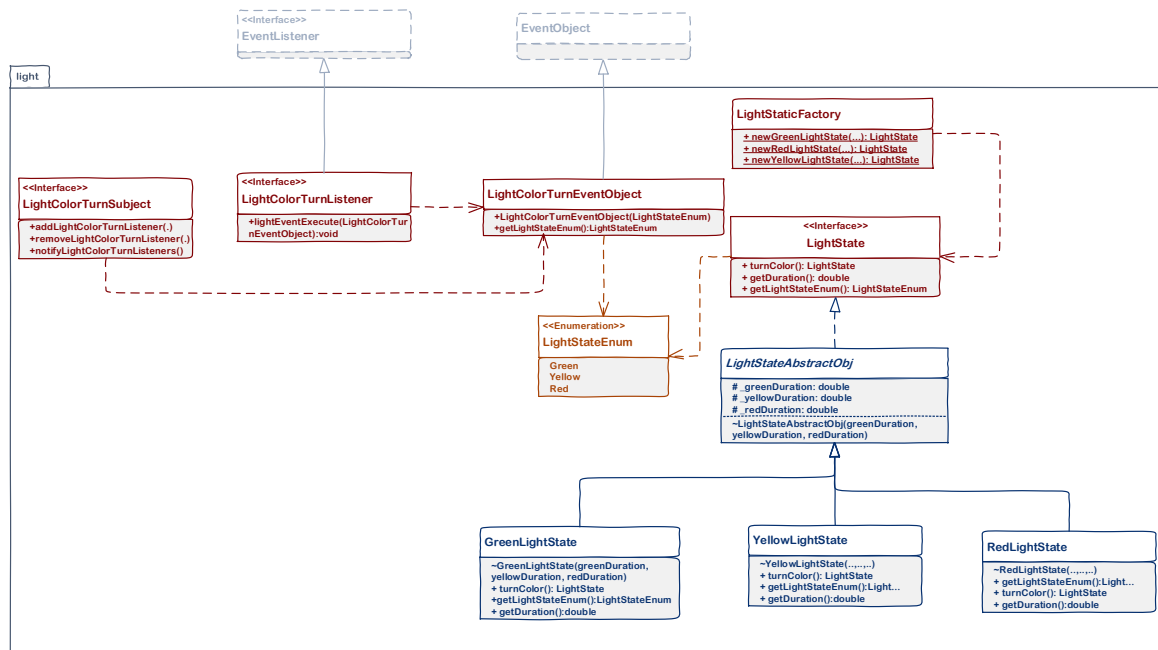


FIGURE 2.LIGHT PACKAGE

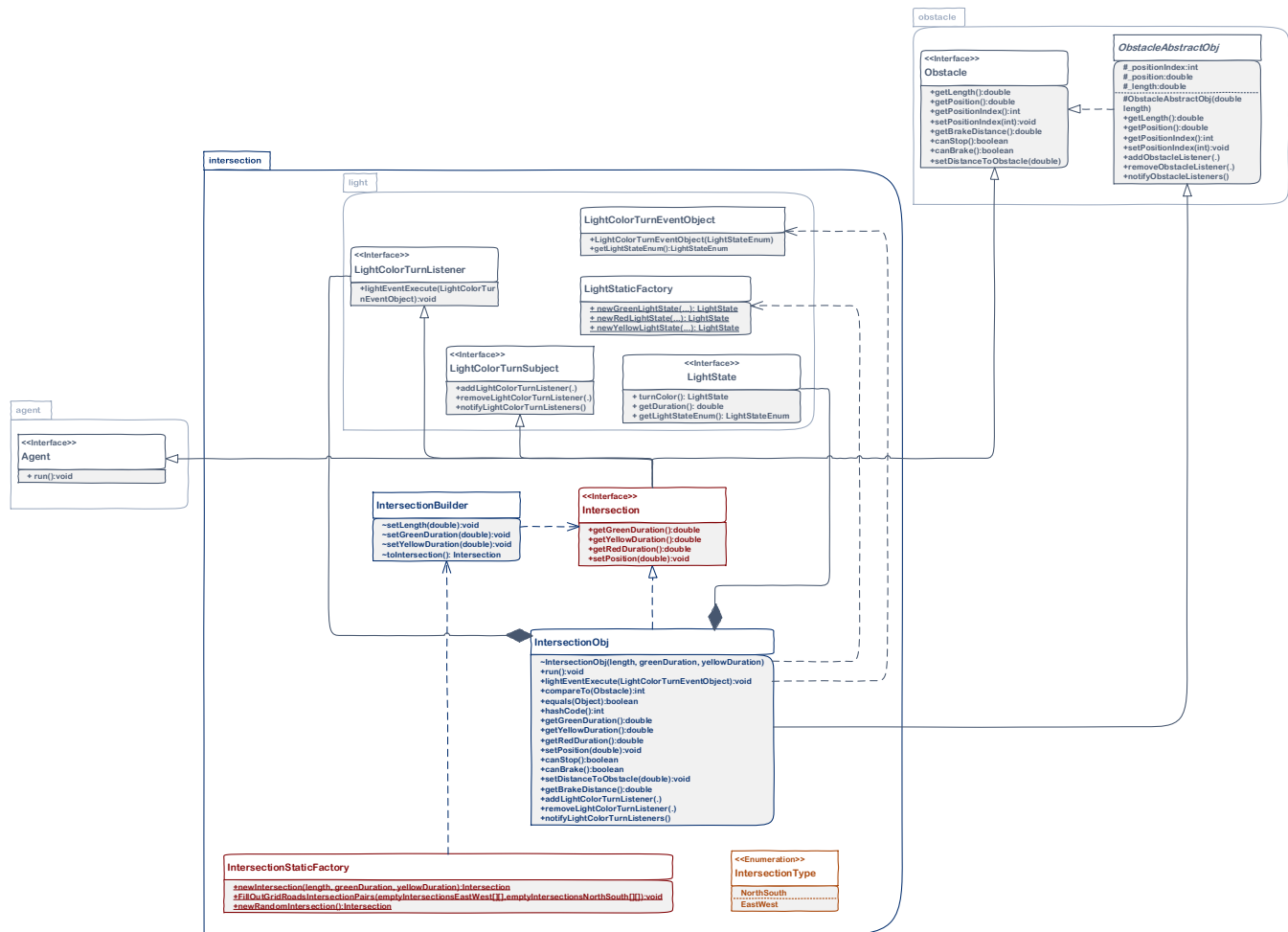


FIGURE 3.INTERSECTION PACKAGE

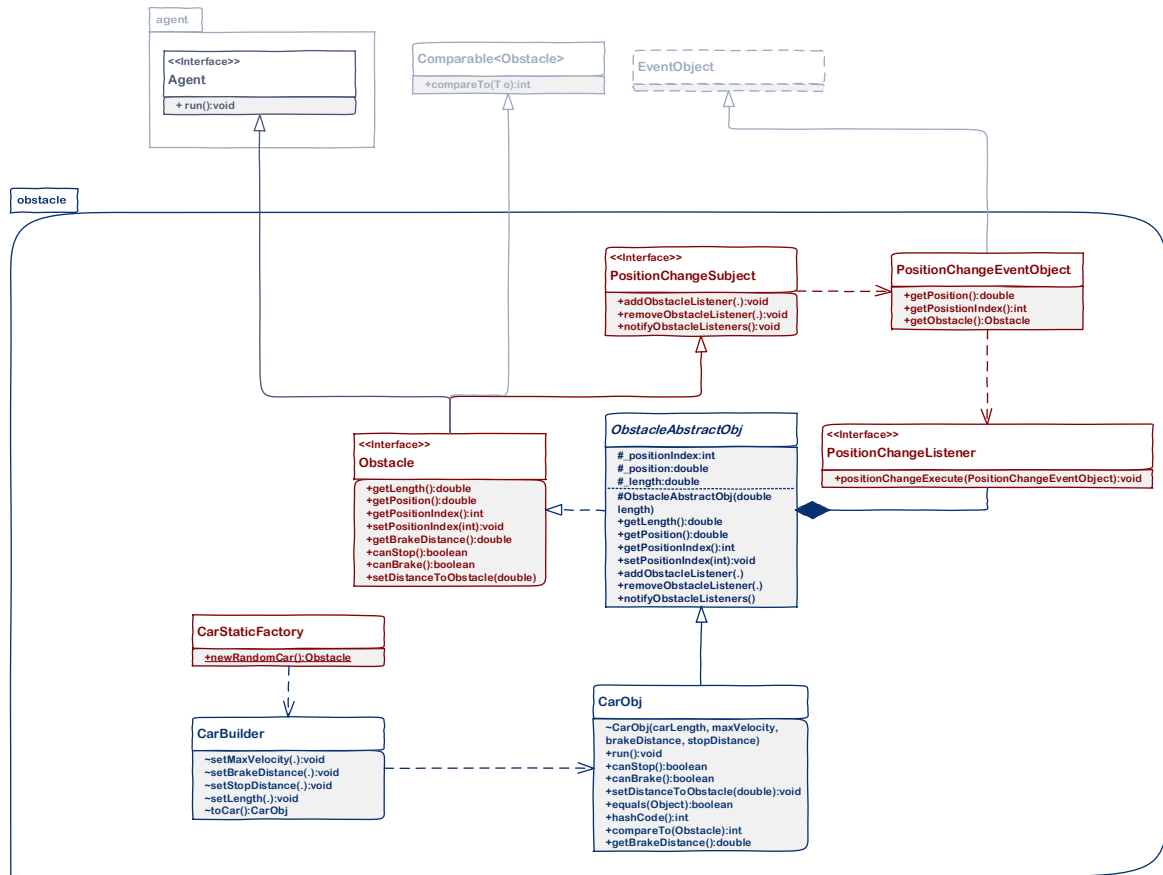


FIGURE 4. OBSTACLE PACKAGE

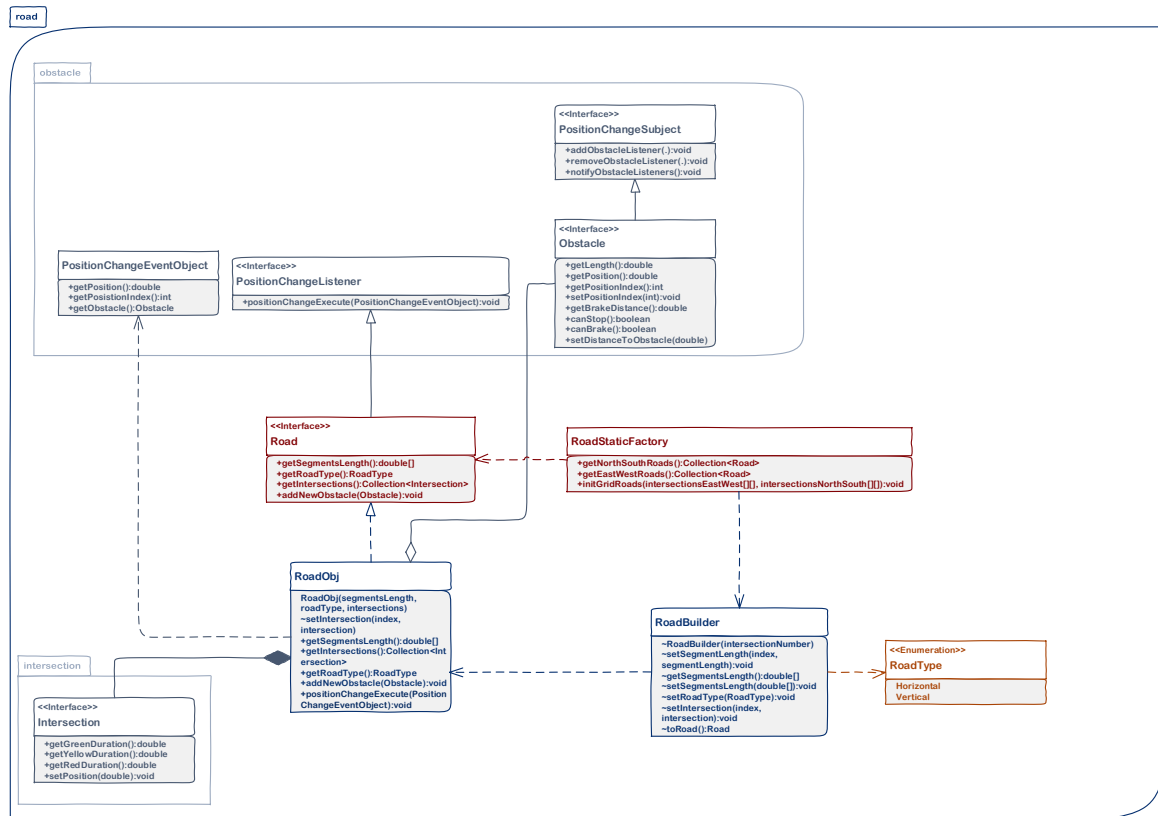


FIGURE 5. ROAD PACKAGE

NOTES ON PATTERNS

MVC

The final project uses MVC to separate models and UIs.

INFINITY STATE MACHINE

State pattern was used for traffic lights. So I can separate Green, Yellow, Red state into separate classes.

TEMPLATE

Template patterns used for UICarHorizontal and ObstacleAbstractObj. The common codes for UICarHorizontal, UICarVertical and IntersectionObj, CarObj are extracted into UICarHorizontal and ObstacleAbstractObj.

OBSERVER

Observer patterns are used into many places. Such as MVC, Intersection, Obstacle. Class Intersection is both observers and listeners.

STATIC FACTORY

Following the rule: only static factory pattern and interface will be exposed to other packages. It is good for code maintainability.

BUILDER

Following the rule: all immutable classes are needed to have their builders.

PROXY

I used proxy patterns as Immutable collection.