Assignment 1A. Familiarize yourself with RODIN platform.
Assessment: pass fail.
Install Rodin platform from http://www.event-b.org/install.html
Explore various features of the platform and get yourself familiar with the basics of Event-B modelling (lecture slides as well as additional tutorials, wiki etc)

Task description:
There are two traffic lights installed at a road intersection. As usually, their goal is to ensure that there are no green light lit for the cars moving in the orthogonal directions and hence cars do not collide. We assume a simple case, no turns etc.
Each traffic light goes though the cycle of red -> yellow -> green lights.
The specification should represent the behavior of each traffic light.
The specification should contain the invariant stating that traffic lights cannot be simultaneously in the green state.
Each traffic light can check the state of the another traffic light.
The specification should never terminate.
Initially both traffic lights are red.

Perform the following steps:

- Create a new project called TrafficLight
- Create a context and machine of the specification of a traffic light.
- Introduce the variables allowing you to represent the behavior of each traffic light, i.e., switching between the lights.
- Define the invariant and include not only the definitions of the types but also safety condition.
- Use animation to check that your specification works as expected.
- Go to the prover view and explore the proof obligations. Are they all proved (called discharged)? If not explore why they are not proved and either correct the specification or try to use interactive prover to discharge them.
- Generate pdf of your specification: the context and machine. Make a screenshot of the provers view to demonstrate that all proof obligations were discharged. **Submit these parts as a single pdf file.**