Traffic Lights

Introduction

You are required to provide the code for an application that simulates a set of traffic lights at an intersection.

The traffic lights are designated (N, S) and (E, W) like a compass.

Requirements

The lights change automatically every 5 minutes.

When switching from green to red, the yellow light must be displayed for 30 seconds prior to it switching to red and the opposite direction switching to green from red.

You're not required to optimize, just focus on a functional approach to requirements Provide the output for the light changes which occur during the period between 9am and 9:30am.

You should provide unit tests for your solution.