**University of Plymouth**

**NET107:** Principles of Infrastructure

Coursework

Traffic Lights –Report

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Table of Contents

[Overview 3](#_Toc514641560)

[Client 3](#_Toc514641561)

[Usage 3](#_Toc514641562)

[Server 3](#_Toc514641563)

[Usage 3](#_Toc514641564)

[Application Layer Protocol (API) 3](#_Toc514641565)

[Evaluation 3](#_Toc514641566)

[Highlights 3](#_Toc514641567)

[Limitations 3](#_Toc514641568)

[Further Development 3](#_Toc514641569)

[Contributions 4](#_Toc514641570)

# Overview

The Traffic light client and server aims to represent a realistic situation of a crossroad with cars and how the server manages to the traffic system.

The traffic light program handles many connections (4 clients will connect to a single server) from different IPs and a restriction was made so that same IP connection can be blocked.

The light system displays Red until ten cars are on the que and also a timer was set to check the number of cars on each road deciding which road’s car should be allowed to go or halt. Each IP connection is being taken as one road of a cross section, making the program smoother to run on server side.

# Client

## Usage

# Server

## Usage

# Application Layer Protocol (API)

# Evaluation

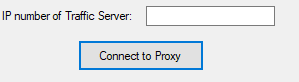
## Highlights

## Limitations

## Further Development

# Contributions

The user has to make sure that the server and the client is connected with the help of IPS.



(insert server ips connection pics)

To test out the server the client can send any number of car one by one ( like in a real world) and to confirm a car has been sent and received by the server messages are displayed both in the server and client side.  For a better understanding of the situation an animation was created for the user which really stands out as the animation was fully raw coded without the use of any DLL or vector which was really tough for animating in a real time server.

Animation , time ticker , count of cars …

Main Evaluation

 To make it more realistic the time that checks for total number of cars was not fixed but rather was implemented in such a way that it check which road reached the max que of 10 cars first and then resets the timer itself to go on in a clockwise rotation.  As, mentioned earlier messages are send to both server and client…………..

* 1. Warning

Dnt add same ips etc…..

* 1. Drawbacks

Animation problems

* 1. Further Development Scope

Add multi thread, linked list , emergency portal,sensors, 2 way roads ets…….