Trafic Control System
Project Plan

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Contents

1 Introduction

The purpose of this document is to describe the overview of the given project. The aim of the Project Plan is to serve as an official contract between the formal client and the team. We, 4Cube, will elaborate the project in details, such as: who the formal client is, their goals, what we will provide to satisfy their requirements and also what we are not obliged to deliver of the client. // In addition we will discus in details the project management such as the cost, time, personnel involved, etc.

2 Project Statement

2.1 Formal Client

The formal client of this project is Mr.George.
He works in the city of CSharp, in which he is mainly responsible for the traffic situation.
Our formal client, Mr. George contracted us via his acquittance Mr Peter Massen and Mr. Peter Boots who are both teachers of Fontys.

2.2 Project Leader

Agnes Wadee, a Software Engineering student in class Ei7s2, of Fontys University of Applied Sciences will be the project leader.
The project leader represents a group of Software Engineering students: 4Cube.

2.3 Current Situation

In the past few years, the city of CSharp has endured a lot of traffic accidents. The traffic is poorly managed, and therefore, our client, Mr. George aims to place some traffic lights in order to reduce the impact positively in the society by reducing the occurrence of traffic accidents on the roads.
Based on the overview received from the client about the project, we made a few assumptions. CSharp is a large city with a huge population.
There is currently a non-existing application or an existing application which isn't functioning well, in order to assist Mr. George in his tasks.

2.4 Project Justification

In order to overcome the occurrence of accidents in the city of CSharp, our formal client wants to place traffic lights as a measure. However, idea of just placing traffic lights on the roads without investigating the impact is not optimal. Therefore, he wants a traffic simulation program with the objective of it being able to simulate the traffic situation.
This traffic simulation software will give information to our formal client about whether it is a good idea to place the traffic lights and the ideal location to place it.

2.5 Project Product

The goal of 4Cube Developers is to produce a traffic simulation application for our client.

2.6 Project deliverables and non deliverables

In this project we will deliver:

- A tested and working traffic simulation application.

- The source will also be a deliverable

- A user manual which outlines the features of the application and guidelines for the user.

- A process report.

- A Project Plan

- User Requirements Specification Document which outlines the technical requirements of the project.

- A Design Document which will give an overview of the design of the software.

- Agendas and minutes of every meeting

- A Test Plan which elaborates on the tests we have made throughout the application.

- A final Presentation about the project.

Unfortunately, we will not deliver the following:

- There will be no training organized for the users of the application.

- There will be no seminars or talks about the use of the application.

- For presentation purposes only, exemplary data will be used, but the client is responsible for the implementation of the actual data.

- Disclaimer: It is not our responsibility to handle the consequential damages as a result of using this application.

2.7 Project Constraints

Language
The language constraint on this project is `C#`.
The language of the software will be English.

Manual
The manual will be in PDF.
The language of the manual will be English.

Operating System
The software should run on a computer with Windows running the latest .NET Framework. If the computer runs on Mac OS X, Linux or *BSD, we recommend a Windows virtual machine.

Usability
This application will be a single user application. Multiple users cannot operate with the software at the same time.

Time
The project has to be completed within 14 weeks.

2.8 Project Risks

Table 1: Risks Outline.

Risk	Possibility	Impact	Alternative Scenario
Risk of not being able to complete before the deadline	Low	High	Check schedules regularly to ensure we are on schedule.
Occurrence of application errors	Moderate	High	We will test our devices beforehand to avoid any of these occurrences.
Use of legacy software poses a risk since the implementation could be difficult	Low	Low	We will write our own code if legacy software is not convenient

3 Project Phasing

Below is an image showing the time phasing of the project, together with the tasks to be performed and the time taken.
The total time taken to complete and deploy the project is 14 weeks, and the breakdown of time is stated below.
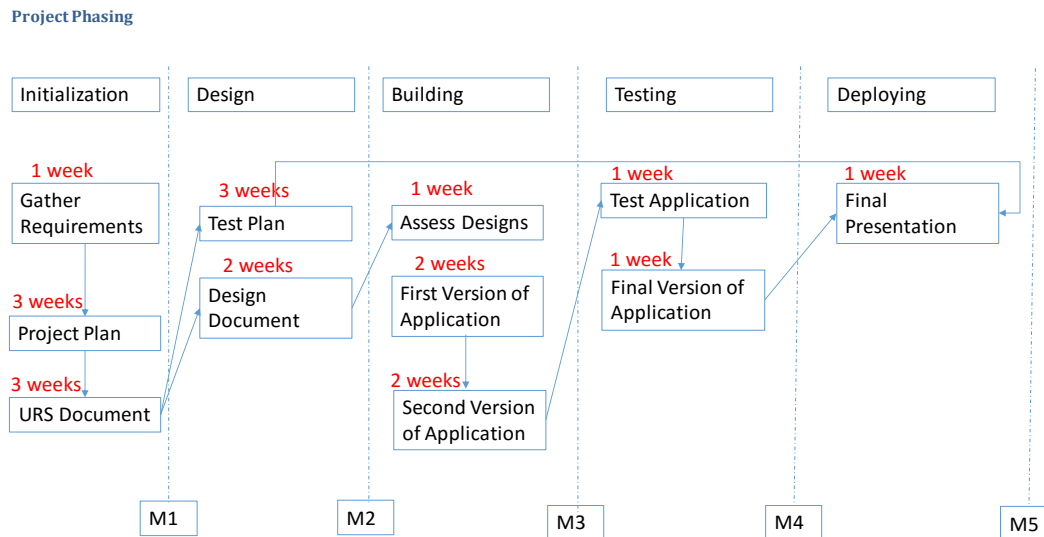
Project Phasing

| Initialization | Design | Building | Testing | Deploying |

1 week
Gather Requirements

3 weeks
Test Plan

1 week
Assess Designs

1 week
Test Application

1 week
Final Presentation

2 weeks
Design Document

2 weeks
First Version of Application

1 week
Final Version of Application

3 weeks
Project Plan

3 weeks
URS Document

2 weeks
Second Version of Application

M1   M2   M3   M4   M5

Figure 1: Project Phasing

3.1 Deliverables for each milestone

3.1.1 Milestone M1

- Detailed plan of delegation of tasks for team members.

- The Project Plan

- Agreement with the formal client concerning the deliverables and non deliverables.

- Detailed information outlining the requirements of the application.

- URS (User Requirements Specification Document)

- Design of Graphic User Interface

3.1.2 Milestone M2

- The Test Plan

- The Design Document

- Final version of Project Plan

- Final version of URS Document

3.1.3 Milestone M3

- Working version of the traffic simulation application

3.1.4 Milestone M4

- Tested application and a revised version in relation to the tests performed.

3.1.5 Milestone M5

- Deployment of application and presentation.

4 Project Management Plan

4.1 Money

There are no cost involved in making the project, since we are making an application, that does not require, web hosting, neither does it require outsourcing or a special development tool. To build the software, Visual Studio is required, but, we as developers have the educational license.

4.2 Skills

The project will be performed entirely by the team members of 4Cube consisting of:

- Agnes Wadee
- Coen Stange
- Wen Li
- Yongshi Liang

This team is made up of expertise in the following areas which are beneficial in achieving a successful product.

- Project Manager
- Software Engineer
- Software Architect
- User Interface Designer
- Software Tester

4.3 Quality

Being aware of our target audience, we realized that they do not have that much knowledge in ICT. Therefore, we presume a user friendly interface will be ideal to enable them use the application with ease.
It is very important to us that our application runs smoothly and efficiently without any bugs. In order to assure this quality, we have a Test Plan made which outlines what we will test for in the software and we will make sure our software runs according to the plan.

4.4 Information

Table 2: Information Table

Role	Project Plan	Minutes	Agenda	Deliverables	Presentation
Formal Client	A	R	R	R,A	R,A
Project Leader	Dr	A	Dr	Dr, A	Dr, A
Project Team	Di	Dr	Di	Di, Dr	Dr
Chairman	Di, A	A	Dr	A,S	-
Secretary	S	Dr,S	Di,S	S	-

Legenda:
Dr - Draw Up
Di - Discuss
A - Approve
S - Send
R - Receive

4.5 Time

The duration of the project as stated earlier is 14 weeks. The first 7 weeks will be used to make documentation and the other 7 weeks will be used for the actual implementation.

Table 3: Time Overview

Activity	Category	Estimated Time
Documenting Project Plan	Documentation	2 weeks
Writing URS Document	Documentation	3 weeks
Writing Test Plan	Documentation	3 weeks
Making Design Document	Documentation	2 weeks
Implement first prototype	Application	2 weeks
Develop second version	Application	2 weeks
Test Application	Application	1 week
Final version of Software	Application	1 week

4.6   Organization

There are two types of organizing which will be described in the section. The first type of organization is internally (within the team). It is important to notice that we work in such a way that everyone experiences working in each activity. Figure 2 shows the internal organizational structure
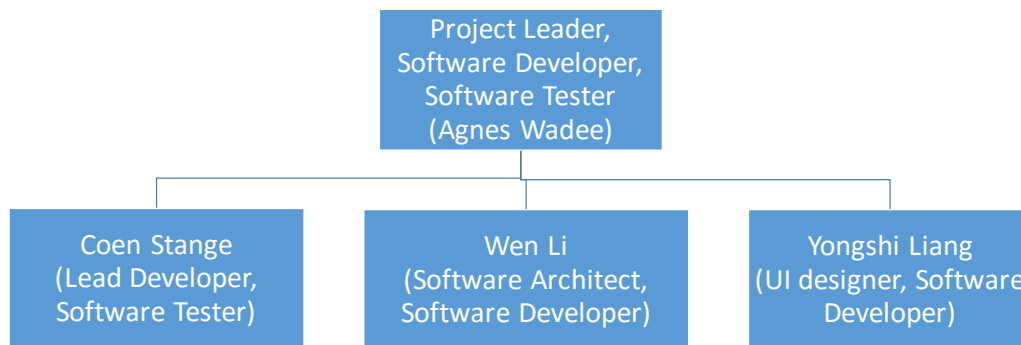

Figure 2: Internal Organization

Whereas, the second type of organization is external.This will outline the communication and relations between the formal client and the team of software developers. Figure 3 shows the hierarchy of each of the parties involved.
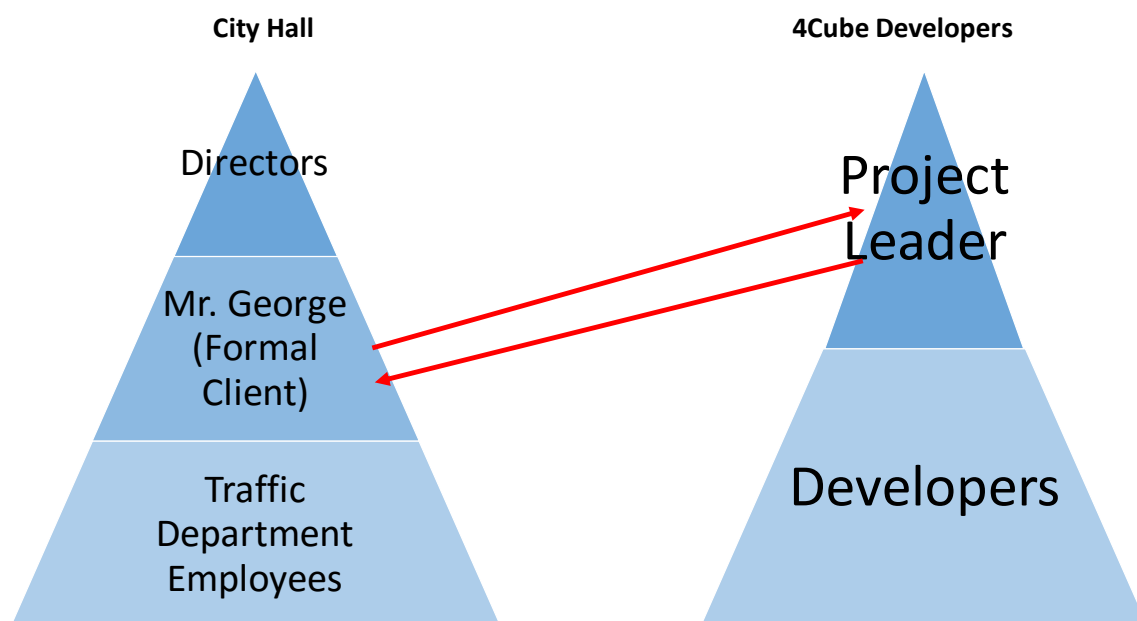

Figure 3: External Organization