CE101 Team Report Assignment

**Team:** *T*

**Team Leader:**  *Sean Traynor*

**Project Manager:** *Dale Carr*

**Team Specialists:** *Laurynas Pupsta, Charlie Hammond, Valentinas Vaiceliunas*

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# Chapter 1 The Executive Summary (?? Words, Sean Traynor)

This is the team report for Team T. In this report every member has written about how the product was developed, what they did to contribute to the product, issues that occurred during and after the development of the product and what the intention behind the product is. The team report is divided into 5 chapters, one of which you have already started reading. When you are finished reading this team report you should have a rather detailed idea of almost every aspect of the development process of the product. The second chapter will inform about team working, some of the difficulties and some of the benefits of working as a team. Chapter two is also where every team member has written a report on their contribution to the product. Chapter three is about the product development, issues that we encountered during and possible issues after the development of the product. The product development chapter is the largest and most detailed chapter in the entire team report. In chapter three you will find the Software Requirements Specification. The SRS is a rather extensive part of this document, as it holds quite a lot of information about the product. In the SRS you will learn who the intended audience for TecInASec is, you can find the scope of TecInASec, definitions and abbreviations used through the entire team report and SRS, and that is only chapter 1.

# Chapter 2 Team Working (?? words)

## 2.I An introduction to Team Working (Sean Traynor)

Working with a team in a collaborative project is a rather challenging process; it requires good communication between several team members, full understanding of tasks that are set and the activities that are expected from each team member. Team working requires that everyone attends to the meetings, and if someone were to be absent; that they make the effort to get up to date on current tasks on their own time.

Working in team can be a lot more efficient than working on your own. There are more minds working on the same project, all with different opinions on what should be done and how the product will achieve optimal proficiency. This can combine the best pieces of each mind which will eventually result in an improved final product, compared to a project managed and produced by one person.

## 2.II Team Activity Report

### 2.II.a The team effort summary table

(Explain Appendix B)

### 2.II.b Detailed report of each team members contribution to the project (Sean Traynor, Laurynas Pupsta, Charlie Hammond, Dale Carr, Valentinas Vaiceliunas)

#### Sean Traynor

##### Introduction

I am the Team Leader for Team T. The role of the team leader is to take a part in all the different aspects of the product and process of developing the product, but not fully specialize in one part of the product. This hasn’t been applied fully in this team because we ended up being one person less than first anticipated, and since I had some previous experience with working with GUI code before I assigned myself most of the GUI coding in python. I think that I was assigned the Team Leader role because of my previous experience with coding, working in teams and because I was generally interested in the responsibility of being a Team Leader.

##### Past Work

I have been posting tasks on the Moodle forum when necessary [1], which has been quite irregularly. The reason for this is because of the good communication that most of the team has outside of the lab sessions. When we first started the group project my first task was to create a team skills list [2]. After that I went on to try out some different graphical libraries for Python, such as Tkinter and PyQt4. The main responsibility outside of keeping updated on what the team is doing and assisting the team in any problems that may occur was the GUI code. I was primarily working on the User Interface for TIAS up until we decided that we should abstain from using Tkinter and create a website instead. We had some difficulties connecting to the database that holds all information that has been scraped from the website because the database is hosted on an OpenShift server. But after some experimenting we figured a simple solution to the problem by using Flask. I have also created a couple of reports and précis, such as a report on Intellectual Property [3].

##### References

[1] – Moodle. "*Team Forum – Team Tasks*," [www.moodle.essex.ac.uk](http://www.moodle.essex.ac.uk). [Online]. Available: <https://moodle.essex.ac.uk/mod/forum/discuss.php?d=98534> [Accessed: Mar. 03. 2015].

[2] – Moodle. “*Team Skills List*” [www.moodle.essex.ac.uk](http://www.moodle.essex.ac.uk). [Online]. Available: <https://moodle.essex.ac.uk/mod/data/view.php?d=128&rid=8504> [Accessed: Mar. 15. 2015]

[3] – Moodle. “*Report on Intellectual Property*” [www.moodle.essex.ac.uk](http://www.moodle.essex.ac.uk). [Online]. Available: <https://moodle.essex.ac.uk/mod/data/view.php?d=128&rid=9606> [Accessed: Mar. 15. 2015]

#### Charlie Hammond

##### Introduction

I am the Design Specialist for Team T. It is my job to come up with the ideas and help get the design aspects of the project across to the rest of the team as well as draft the refined ideas so that they can eventually be implemented into the application/program that we are, as a team developing.

##### Past Work

Starting from the beginning. 10th November 2014 it has been my role in the team to collectively work with each of the members, whether it be in the forum online [1] or with a team meeting which happens every two weeks. Since the launch of the project I have written reports covering application design [2] to potential health and safety when using the application [3]. All of the aspects that I have coved in my reports which can be found within the list of uploaded documents on the Moodle website supported by the University of Essex [4] are aspects of design that many don’t considered when looking at an application. At this point of the application design, as of the 18th February 2015 my designs are all theoretical but are essential to the team so that we as a team can collaborate and have an insight to what the final design could be like. Each iteration of the design can be seen in the documents I have uploaded on Moodle, so far the design assets we are interested in using have been uploaded in a folder [5] so that not only I can see and manipulate them. I have given creative control over my designs to the team for inspiration and influence so that in the end it’s a product that we can all agree on.

##### Additional Notes

At this stage of the design. Astatically the program is plain, clean and simple as it is going to be a practical and useful over vibrant and attractive. This will change in the future as the application comes together and is functional it is then possible for me as a designer to look at the canvas I have to use to project the ideas that team T have for the aesthetics of TIAS.

##### References

[1] - <https://moodle.essex.ac.uk/mod/forum/view.php?id=208159>

[2] - <https://moodle.essex.ac.uk/mod/data/view.php?d=128&mode=single>

[3] - <https://moodle.essex.ac.uk/mod/data/view.php?d=128&mode=single&page=56>

[4] - <https://moodle.essex.ac.uk/mod/data/view.php?d=128&mode=list&perpage=50&search=&sort=0&order=ASC&advanced=0&filter=1&advanced=1&f_367=&f_368=&u_fn=charlie&u_ln>=

[5] - <https://moodle.essex.ac.uk/mod/data/view.php?d=128&mode=single&page=60>

#### Dale Carr

##### Introduction

As the project manager for team T, it is my duty to keep all members updated on the progress of our product. In essence, it is my job to ensure work is being completed on time and to track the progress of our product with a Gantt chart. My duties also include updating the team logbook with the agenda and minutes for each team meeting. While I have not had as much work to complete as others, I believe my work in keeping both the logbook and Gantt chart updated has helped to keep the product on track to completion.

##### Past Work

As per my responsibility as project manager, I have kept both the Gantt chart and team logbook updated with the necessary information. I have completed a report on Tkinter [1] as it was going to be used to create the GUI for our product (decided against at a later date). As the logbook will show, I have not had many tasks to complete, barring the work on the logbook and Gantt chart. I believe this to be due to the higher workload in being the project manager, as well as my other teammates being better suited than me in tasks involving design or coding.

[1] - [https://moodle.essex.ac.uk/mod/data/view.php?d=128&rid=9194](%20https:/moodle.essex.ac.uk/mod/data/view.php?d=128&rid=9194)

#### Valentinas Vaiceliunas

##### Introduction

I am Valentinas Vaiceliunas. I work on a Team T project called TecInASec as a business specialist. I have been mainly working on legal and ethical issues of our team product. My main job was to create a survey and ask other people that may be our customers in the future what kind of things they know about computers and what kind of computer they would look for. My main job tools were Word and SurveyMoney.com website that lets you make and publish surveys.

##### Past Work

At first I had to make a survey so I had to learn how to make and publish surveys, so I did use surveymoney.com and made the statistic work that we got from the survey responses. I have done some other work in the team too, for example some reports for the methods that we used in our programming language, like BeautifulSoup. BeautifulSoup was the main component of scraping and I by doing a research on it I learned how it is used and works on Python programming language. Also I have learned more about surveys, about publishing it and the use of survey making in business because it is very important to know what your customer needs. Working in the T team I learned how every role is important and every person matters in the work they do to the team. I tried to help my team mates if that was necessary but because we have a great team leader who helped everybody and took care of everyone my help was rarely needed. I worked on statistics on our product and I hope I will be working more in the future when our product hits the market. I believe, I could have helped more with programming but I tried to do all the jobs that was given to me as a business specialist.

#### Laurynas Pupsta

##### Introduction

I am Laurynas Pupsta. I am the team programming specialist working a project called TecInASec. I have been mainly working with Openshift server, Python, phpMyAdmin and git. My main achievements so far are fully functional scraping code for PCWorld, working communication between the server and database and everything associated with gathering and analysing(filtering, manipulating and etc.) information.

##### Past Work

I have done quite a bit of work with BeautifulSoup scarping module for python. Wrote my own scraping code for PCWorld which works perfectly. [1]Wrote a report about how easy it is to use BeautifulSoup and how splendid it works in reality. Also I have been working with python module requests which help a lot. It easier to use HTTP requests than python native urllib requests module. [2]I wrote a report about HTTP requests and how a simple code to send a request looks like. I am also working with phpMyAdmin which helps me work with pymysql module. I can instantly see my stored information from the scraping code and lets me test query codes for storing or extracting information from TecInASec DB on Openshift. [3]I wrote a report how useful phpMyAdmin really is and how accessible it is for our every team member. [4]I have also managed to make the site running where team members can actually receive the login details to the database. This makes it easy for everyone to access the database and test queries for the product.

# Chapter 3 Product Development (?? words)

## 3.I An introduction to Product Development (Sean Traynor)

What exactly is product development? As the name suggests, product development is the development of a product and all the processes involved in doing so. There is no correct way of developing a product, as long as the result is a fully functional product. Product development is a rather extensive process and is quite difficult, especially if the product is being developed by several people.

Developing a product usually includes a group of people with a vision for a product, such as a piece of software or technology. It often requires the modification of an already existing product, if this is the case the modification should end up with an improved version of the product, or an alternative version of the product. [1] In our case we are modifying already existing software to best suit our needs. The software we are developing is a price comparison software, but it specialises in computers, specifically for the UK.

The development can be built on a couple of methods. The most common ones are Waterfall and Agile. [2] The Waterfall methodology starts off by determining the requirements and specification. This methodology is commonly used when the developers have a clear vision of how the product is going to work, look like and they know exactly how to get the finished product. This is the reason why the more common methodology nowadays is Agile. Agile is a lot more adaptive and progressive. Agile methodology uses a method called Sprint, and usually lasts for a week to a month. During the Sprint the team members takes on a small set of tasks and generate reports based on what work was done on the project during the Sprint.

[1] Business Dictionary. “*What is product development? definition and meaning*” <http://www.businessdictionary.com/>. [Online] Available: <http://www.businessdictionary.com/definition/product-development.html> [Accessed: Mar. 03,2015]

[2] Udemy. “*Agile Vs. Waterfall*” https://blog.udemy.com/ .[Online] Available: <https://blog.udemy.com/agile-vs-waterfall/> [Accessed: Mar. 03,2015]

## 3.II The Team Product

### 3.II.a The product specification

# Introduction

## Purpose (Sean Traynor)

The purpose of the software requirements specification for TecInASec is to inform the intended audience about the plans that we had for the software and what we have done with those plans. The intended audience for the software TecInASec is users that are looking to buy a new computer, and wish to easily search for a name, brand or specify a price range to find the websites that have the best offers on the computers the user is searching for.

## Scope (Sean Traynor)

TecInASec is a computer comparison price application used to search and compare a range of systems by parameters specified by the user. The information about the computers are stored in an SQL database on the online application PHPMyAdmin and is only accessible to the use of the application strictly for security reasons. Using an online server means the information that is stored can be collected from any device with an internet connection. The original idea for the product was a python written application with a GUI add-on called Tkinter. Tkinter is an add-on used for graphic user interface design, the add-on allowed for code to be processed into user friendly visuals by applying order and function to the data collected. After some development with this original concept the team came to a conclusion that this would be used as research for the structure of a final product that will be applied to a web platform by using Flask, JavaScript, HTML and CSS. Queries that retrieve the information get processed by Flask and the content gathered from the queries. This application of our program means we have creative control, allowing the final product to be aesthetically pleasing and the functionality to be sound.

## Definitions, acronyms and abbreviations (Sean Traynor, Charlie Hammond)

**TecInASec**: The name defines the intention behind the software, the cheapest computers found for the user in just a couple of seconds.

**TIAS**: TecInASec, the software name.

**Basic** and **Advanced page**: The two main search pages in the application.

**Results page**: The main page for displaying results to the user.

**Tkinter**: The native GUI library for python we used for developing the GUI before we went over to using website.

**Requests** and **Beautiful Soup**: Libraries used for the scraping process in the python code.

**Assets** and **Elements**: objects in the program that make up the look of the applications.

**HTML:** (HyperText Markup Language) is the markup language that is read by the web browser and displays content to the user.

**CSS:** (Cascading Style Sheet) is the formatting language used to format HTML in a visually appealing way.

**MySQL:** The SQL database we use to hold all of the information scraped from the website we are scraping.

**Flask:** “LAURYNAS FILL IN HERE”

**APPLICATION/PROGRAM:** When we write application or program, we are referring to the python code, Flask code and the HTML/CSS combined into our product: TecInASec.

**Web Server:** We are currently using the URL [www.dbblts.com/tias](http://www.dbblts.com/tias) to redirect people to the OpenShift server as it is a link that is a lot easier to remember than <http://tecinasectemp-pupsta.rhcloud.com/website>.

## References

**Provide a list of references used in the SRS.**

## Overview

This software requirements specification is split into sections. At this point you would have already read the introduction to the document which is made up of a title (introduction) and sub sections labelled in ascending decimal value. This ascending decimal value format can be seen consistently throughout the document with appropriate headings. Section 2 will explain the overall description and will be followed by section 3 which talks about the specific requirements. The following subjects are appendixes and index.

# Overall Description

## 2.1 Product perspective

**You should describe the overall system clearly stating if it is an independent system or part of a larger system. A block diagram of the product may be useful.**

## 2.2 Product functions

List: [Write into sentences!]

* Search algorithm
* Displays computers based on query
* Adaptive user interface functions
  + Creates queries based on what fields have content

## 2.3 User characteristics (Sean Traynor)

TIAS is made to be as simple as possible to use, there is not any extensive technical knowledge required, nor experience. The optimal user group would be users that have had some previous experience with using entry fields to fill in information, and users that understand that the software isn’t written by professionals, as there could occur errors if the user were to input something that we did not take into account whilst developing the software.

## 2.4 Constraints (Sean Traynor)

As we are using a website for user interaction with the software, there are not really many constraints. Hence the adaptability of websites, we can view the product on almost all devices that can connect to websites, such as tablets, cell phones, computers and several other devices. Due to the extensive variety of web-browsers that exist across the different devices, there are some constraints that occur when it comes to displaying things identically across the different browsers. If one were to access the website on Internet Explorer, it would display with either more or less margins around some elements than it would display on Google Chrome and Firefox. There aren’t really any constraints when it comes to hardware for the user, as websites are quite processor friendly. Two of the major possible constraints are heavy web-traffic and security. Since we are hosting the website on a free service called OpenShift, we haven’t really got much control over how much traffic the website can hold before the servers are overloaded, and as we are hosting the website on OpenShift servers, we haven’t really got much control over the security measures that are being used for our website.

## 2.5 Assumptions and dependencies

**List assumptions such as operating system requirements on the hardware to be used for the software product.**

## 2.6 Apportioning of requirements

**Provide detail regarding any delay of specific requirements to later versions of the software**.

# Specific requirements

**External interface requirements: User interfaces, hardware interfaces, software interfaces, communications interfaces.**

**Functional: State all the fundamental actions of the software product being developed. Provide information on the user type to whom the functional requirement applies. For example "the customer" will be able to download the software from the app store, and "the administrator" will be able to create an account. List all the functional requirements providing sufficient detail to describe the function. Review the SRS document from the University of Gothenburg, provided in the chapter 3 initial reference material folder. Research SRS functional requirements.**

**Non-functional: These can be performance indicators such as the capacity, response time, or fault recovery time. They could be design constraints such as the hardware to be used or the memory requirements. They could be software system attributes such as the adaptability, availability, reliability, usability, or security.**

# Appendixes

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### 3.II.b The product design (Sean Traynor, Charlie Hammond)

The design of the product is set to be as user friendly as possible. The reasoning behind this is because we want the target market to feel at ease with the software at first glance. All of the elements on the GUI are optional; as long as at least one of the fields is filled in the user will get a result. The thought behind this idea is that users might only want to search for a specific price range, or users might only want to search for a specific brand regardless of price.

The appearance of the application is a likeness to the simple practical aspects of the program. The established iteration of the product is not too simple where as it would be boring and bleak but again not too vibrant and distracting thus to keep the user from detracting the attention away from the intentions of the application. The design process of the application follows some simple steps. Ideas, refinements, discussions and implement; these rules help to guide the ideas into satisfied implemented graphics or assets. From the step by step process it's been possible to implement one of the team’s most significant assets, the logo. Shades of black and red in the colour palette work well with each other, this coloured theme has become the signature for the application. With each step in the design process all the assets and graphics seen in the application follow the same theme to keep it professionally consistent, aspect like this in the product design aid to insure top quality production for the users benefit.

Product design also holds some legal matters which will be explained in depth in section 3.III.a of this document.

### 3.II.c The product implementation (Laurynas Pupsta)

The product development stage. The main goal was to create a product that would scrape a computer site for laptops and store it into a database. The information in the database can be pulled by a single HTTP request which is very viable. We have also create and Openshift server where the main python code is running (scraping). This gives us an advantage because the database has a Cronjob to update itself every 6-12 hours. This method saves a lot of performance and it is completely free. Our next goal was to create a website that could access our database and display information on it. This was implemented really simple by sending a HTTP requests with a query string to the main server. The server then analyses the query string and depending on the content, results are returned.

### 3.II.d The product testing (Sean)

## 3.III Context

### 3.III.a Legal matters

The design stage of the product can have some complicated legal matters which can affect the product throughout the development and after the working release. Image, text and likeness of other products are the main issues that lead to a legal matter which our university student team cannot contend with. This could be the use of a font, like the “T” in the logo to the general presentation of the application itself. If any large company seeks to file any legal action towards our developing team; as a team we would need to come to an arrangement which would take time, time better used creating a stable, professional product.

Charlie

…

Valentine

### 3.III.b Ethical matters

Valentine

### 3.III.c Health & safety matters

Dale

# Chapter 4: Project Management (?? words)

## 4.I An introduction to Project Management

A project is defined as a series of interconnecting, sequential tasks that all lead to a specific goal [1]. It is the role of the project manager to maintain an overview of these tasks and keep the project headed in the correct direction [2].

* *Size/cost: investment of money and people*
* *Importance: mission critical*
* *Duration: critical time window*
* *Complexity: across Departments, organisations, countries*
* *Technology: is it off the shelf or breaking new ground?*
* *Risk: what if? (more on this later in the chapter)*

The importance of planning in a project management environment cannot be overemphasised. Careful planning allows for the project to move as smoothly as possible without encountering any avoidable pitfalls. While planning allows for much more control over the project, there may still be times in which unforeseen circumstances can arise. Risks are these unforeseen events that change the course of a project (be it positively, or negatively). For the sake of maintaining stability, it is very important that the risk is dealt with and the plans altered to accommodate it accordingly.

Project management tools

As with any other team member, the project manager has several tools that can be used to ensure his job is as manageable as it can be. The first of such tools is the Gantt chart, this chart allows the project manager to create tasks, allocate resources and accurately calculate the hours put in to the project.

[1] Wysocki, Robert K, “What is a project?” in Effective Project Management : Traditional, Agile, Extreme, 7th ed. John Wiley & Sons, Incorporated, 2013, ch. 1, sec. 3, page 1, lines 1–6.

[2] List taken from the online module book.

## 4.II Project Management Report

Dale

### 4.II.a A description of the Gantt chart[[1]](#footnote-1)

Dale

### 4.II.b An evaluation of the project management

?

# Chapter 5: Conclusions (?? words)

Primarily Sean

# Appendix

## A. Python Code

Laurynas

## B Team effort summary table

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Meeting Attendance** | **References added to the database** | **Précis added to the database** | **PowerPoint Presentation given to team** | **Agendas in team logbook** | **Minutes in team logbook** | **Number of discussions added to the Team forum** | **Product Development** | **Report Writing** |  |
| **Team Member** | **Role** | 0-10 | 0-10 | 0-10 | 0 or 10 | 0-10 | 0-10 | 0-20 | 0 (not involved), 15 (average involvement), 20 (major involvement) | 0 (not involved), 15 (average involvement), 20 (major involvement) | TOTAL |
| Sean Traynor | **Leader** | 10 | 2 | 5 | 9.7 |  |  | 18 | 18 | 16 | 0 |
| Dale Carr | **Project Manager** | 7 | 0 | 2 | 0 | 10 | 10 | 1 | 5 | 14 | 0 |
| Laurynas Pupsta | **Specialist** | 10 | 6 | 5 | 9.5 |  |  | 10 | 18 | 14 | 0 |
| Charlie Hammond | **Specialist** | 10 | 6 | 10 | 9.5 |  |  | 18 | 18 | 18 | 0 |
| Valentinas Vaiceliunas | **Specialist** | 7 | 2 | 2 | 0 |  |  | 2 | 5 | 15 | 0 |

## C Project management Gantt chart

Dale

1. Gantt chart in Appendix C [↑](#footnote-ref-1)