

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DYNAMIC WEBSITES

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I. INTRODUCTION

1.1 The Internet

During the past 5 years I've been fascinated to see how the internet and specifically the world wide web has effected our society. Both in a positive and a very negative way. I believe the rate of growth in technology and PC's over the past decade was a surprise to a lot of people and we're still trying to recover from it.

The internet is very powerful, but it is up to us and our communities to decide how to use that power in a positive way. The more powerful an object is, the more carefully we need to treat it. Power in itself can be a great blessing or be a great curse – it all depends on how you use it. For example, a motor bike is much more powerful the a bicycle. With a bicycle the journey from Limassol to Nicosia will take around 5 hours and a lot of hard work while on the other hand you could make that journey in 45 minutes with a powerful motorbike. Even though the motorbike is much faster and efficient, the danger of an accident is much more liable then on a bicycle. If you want to use the motorbike and be accident free you need to make sure that you have the proper gear, and training and have studied the motorbike to see how it reacts under circumstances. If the motorbike is handed in the wrong hands, then it can cause a lot of damage.

The internet is a very powerful tool. A lot of people, specially in Cyprus, still haven't realized how powerful the internet can be and they've not been using it to its capacity. On the other hand, there are those people who have realized how amazing of a tool the internet is and they've been using it to spread evil on the net such as pornography. They've done tremendous damage to families and teenagers who have become addicted to it which has resulted in to deeper problems.

I've decided to use the internet in the proper way and I want to make a positive impact on the community here in Cyprus with the websites that I create. As I

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mentioned before, the internet is a very powerful tool and I'm determined to use it in a constructive manner.

I hope that through my project people in Cyprus would realize that internet will be a great success if it is intended to *serve* the public instead of trying to sell something to them just for making quick money.

1.2 Designing a website

Many people don't understand that making a website involves two different set of designers – who's jobs are completely different from each other. Both of them are very essential to have an attractive, user friendly and smooth running website.

Making a fully functional website is much like manufacturing a car. There is the mechanical side of the car. The engine of the car which is the most important part of the car, the exhaust, fuel tank, brakes and so on. These are all crucial and essential for a car to have.

On the other hand you have the exterior of the car. The color and type of paint, the selection of the material of the seats. Audio system, and automatic mirrors and alignment of the front sits.

The exterior of the car is more important then you might think. Large companies like Mercedes and BWM spend millions of dollars on research to find out what features to add to their cars to make it more appealing to the eye. Features such as automatic windows, different speeds of windscreen and the option to readjust the drivers sit are essential – and they have absolutely nothing to do with the people who design the engine of the car.

In the internet world you have the web designers and the web programmers.

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Web Designer

The job of the web designer is to design the interface of the web site, the actual graphics and layout of the web pages. Choosing the correct colors and fonts, making sure that everything is nicely lined up and it is pleasant to look at.

Most professional designers – who come up with the artwork of color schemes of huge websites – don't have any clue about programming or even HTML. For them the source code of an HTML page makes absolutely no sense. They only use tools such as Adobe Photoshop and Macromedia Fireworks which are software used by graphic designers. The designer basically designs the look of the page on his tool and then hands it over to a "web designer", who will take the graphics file and convert it into HTML, using tools such as Microsoft Frontpage or Macromedia Dreamweaver.

Good web designers will be familiar with client side scripting languages, such as Javascripts and Style sheets. PHP is a server side scripting language, which means that the code that you write is executed on the server and the result is sent through the web to the clients browser. Client side scripting languages – such as Javascript – go hand in hand with HTML. The javascript is written in the HTML source code and the browser of the client will execute the code – that's why its called client side scripting language.

Javascripts and Cascaded Style Sheets can do wonderful and very impressive things. It is hard to go to any website where javascript is not used. Other then layout and imaging functions, javascripts are great to use for making drop done menus which save up a lot of space on your page and also for checking errors in your forms, i.e. if you have a field for email address; before it submits the form to the server it will make sure that the field is not empty and it has a form of an email address (xxx@xxxxx.xxx). You could do the same error checking with PHP, but it takes a longer time since the data needs to be sent to the server, which will then check it for errors and then send the reply to the client again displaying the error.

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Web Programmer

A web programmer, is a computer programmer who's using the internet as his platform. Most web programmers don't use any fancy software, all they want is a nice little text editor such as UltraEdit on windows, or VI on Linux systems.

The job of the web programmer is to come up with the structure and backbone of the website. Where the files will be saved and how they are all linked together. In dynamic website you need to involve and link together your files with the tables in the database and vice versa.

Good web programmers will be familiar with basic HTML functions – in order to know what their code should look like once its executed – and they should know how to setup and configure server applications; such as PHP, MySQL and Apache.

Web programmers don't really care about the look of a website. That is for the web designer to worry about. All they care is that the data which is suppose to be on a specific page is their, not caring too much about the color, font or size.

For this project I have worked much more as a programmer rather then a designer. Part of the reason for that is because I enjoy programming much more then fiddling with graphics software trying to choose the correct colors and messing around with different font types.

The main reason though for this project is to show how simple and useful programming can be. There are a lot of kids out there who enjoy making website, but they have limited themselves and are stuck on some web building software. With PHP you have very little limitations and the sky is the limit with what you can accomplish using it.

The first part of the project is to research the web and see what options are there out there to make dynamic websites. As we're going to see, there are many kinds of

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applications which can be used for this kind of jobs and it is up to the person using it to decide what to use.

I hope that this project will answer some questions that you had regarding how websites operate.