WEB DESIGN & IT DEVELOPMENT

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

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APPROVAL

This Project/Internship titled **"WEB DESIGN & IT DEVELOPMENT"** submitted by MD. IBRAR HOSSAIN MARUF, ID No: 133-15-3001 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 08-08-2017.

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DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Mr. Narayan Ranjan Chakraborty, Assistant Professor, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ACKNOWLEDGEMENT

I have completed my internship in RMM IT SOLUTIONS LTD. LTD. at Concord Tower, Bangla Motor from April 20 to July 20. My internship report will not be possible without the contribution of few people.

First I express our heartiest thanks and gratefulness to almighty God for His divine blessing makes me possible to complete the final year project/internship successfully.

I am really grateful and wish my profound my indebtedness to **Mr. Narayan Ranjan Chakraborty, Assistant Professor** Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of "*IT Development*" to carry out this project. His endless patience ,scholarly guidance ,continual encouragement , constant and energetic supervision, constructive criticism , valuable advice ,reading many inferior draft and correcting them at all stage have made it possible to complete this project.

I would like to express my heartiest gratitude to **Prof. Dr. syed Akhter Hossain, Head, Department of CSE**, for his kind help to finish our project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

Date 25th July 2017

Letter of Recommendation

This is certify that Md. Ibrar Hossain Maruf has done internship at RMM IT SOLUTIONS LTD. LTD. July 20th 2016 from April 20th 2017 on web development & Networking under guidance of Syed Sohel Parvez , Head Of IT.

We have found him to be a self-started who is motivated, duty bond and hard working. He worked sincerely on his assignment and his performance was very good.

We wish him success for all his future endeavors.

Your truly-

Syed Sohel Parvez
(Head of IT)
RMM IT SOLUTIONS LTD.

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ABSTRACT

During an internship period students receive supervised practical training in his/her field. Internships are often very closely relate to the student's academic and career goals. Internship helps students to gain knowledge about particular fields and internship experience helps students to get job.I had an internship over “Web Design and IT Development” at a software company named RMM IT SOLUTIONS LTD. LTD. There I had many responsibilities like installing and configuring ip address, installing and configuring WordPress, customizing WordPress themes installing WordPress plug-in, testing the different browsers, and also changing database URL using notepad++ tools etc. In this internship report, I tried to show that how I managed those things and how efficient I was there in the time of internship.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The world is extremely competitive now. In every sphere of life and business, competition has become more and more energetic. Every firm tries to obtain and retain capable employees to meet the future challenges. In this competition, obtaining and retaining the best employees has become very important, as employees are that factors who make a firm alive and proceed to the path of profit.

Bangladesh is a developing country. In the last two decades, the country has made outstanding economic progress with GDP growth rate of more than 6 per cent. It is argued that there is a incredible prospect for the country to jump into industrialized economy through the development of the IT sector. Because Bangladesh has high potential to become a huge source of skilled human resources with its cultural acceptance capability, English language skills, analytical capability and a large number of educated and energetic youths with bright talent, good quality and natural ability in software development. A recent study shows that the wage rate of IT professionals in Bangladesh is almost half of the Indian IT professionals. However, the IT sector has not yet been growing as much as expected. The IT sector mainly focuses in Dhaka, the capital city of Bangladesh. There is only one IT clusters namely the IT incubator center, which was established in November 2002, where around 100 IT firms are now doing business.

Software and IT service industry in Bangladesh has crossed a long road over the last few decades. It has matured. The industry no more remains at the sideline. It joined the majority. Not only the industry is contributing expressively in the national income, but also it has been playing very vital role in creating high quality employment for a considerable portion of young graduates of the country.

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1.2 Motivation

As I know, Bangladesh has become one of the huge investor in IT sector. Considerable achievements in the IT sector have already been made over several years towards building a 'Digital Bangladesh' and more creativities are coming. However, those initiative give me a lot of idea to build my career in IT sector. There are so many sectors to build career but I choose web design and developing. It is one of the best field to operate my creativity. I can become my own boss by targeting web markets. I can earn and become independent by targeting both local and foreign client through web development sector.

I can design according to client's requirement. As I know designing is an art and I can show my creativity by developing it. RMM IT SOLUTIONS LTD. give me an opportunity so that I can stand by my own. There help and support teaches me how to build an websites, catch clients need's, teaches me to handle stuff of development and design, cope up with my team member and also develop my skills so that I can become entrepreneur.

My heartiest thanks to my office and other team member who take me to this sector and fulfill my dreams.

1.3 Internship Objectives

An internship is an opportunity to get hands-on experience with an employer in your professional field of interest.

1.3.1 Major objective

Academic knowledge can never fulfill the knowledge of developing websites. The industry has to maintain lot things to reach web developing and designing to root level users. These workings and thinking can only be achieved by working with them.

1.3.2 Specific objective

- Understand the importance of the web as a medium of communication.
- Understand the ethics of creating an effective websites.
- Different positioning strategy of RMM IT SOLUTIONS LTD..

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- Market monitoring of RMM IT SOLUTIONS LTD. program.
- Learn the language of the web HTML and CSS. In addition, Server scripting language PHP.
- Learn the platforms of CMS (WordPress, Open cart etc.).
- Learn to understand the client problems and there requirement.
- Finding a incomplete solution of that problem or requirement
- Build up a good personality to work with team members.
- Be able to implant social media content into web pages.
- Implement and understand how to interpret basic web analytics.

1.4 Introduction to the company

I have completed my 4 months Internship from RMM IT SOLUTIONS LTD. RMM IT SOLUTIONS LTD. is a very new IT firm in Bangladesh, having commenced its operations from mid-2014, established by a group of young entrepreneur. It is one of the e-commerce solution provider that helps companies to build and operate scalable e-commerce solutions that accelerate revenue and decelerate costs. RMM IT SOLUTIONS LTD. offers all kinds of Commercial, Corporate and Personal web based & mobile application services include software solutions, ecommerce solutions and business institution support. I combine internet expertise, creative talent, ecommerce experience and business knowledge to help clients across a variety of industries achieve rapid, measurable online results. As a full service agency, I have years of experience in creative design, customization, technical development, third party integration (ERP Systems, POS Systems, Warehousing & Fulfillment, etc.), quality assurance and support. With a focus on high-end e-commerce and Web application development, most of the business of the company is conducted overseas. RMM IT SOLUTIONS LTD. is one of the IT firm, which simplify all kind of facilities that an IT firm offers.

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1.5 Report Layout

There are few steps of the whole process of report writing. During my interne period, I had to make report of my everyday work. Layout are-

Chapter 1 : Introduction

Introduction, Motivation, Company details and internship objectives are the summary part of the report.

Chapter 2 : About Organization

In this section, tell the reader exactly about organization. Organization task and there activities, analysis part and the structure of the organization.

Chapter 3 : Task & Activities

This is the heart of your report and will largely determine your grade on it. Task and activities shown in details. What you did during in your internship report is the main perspective of this report.

Chapter 4 : Expected Achievements

This part describe your competencies that you earned. During the internship process, what you achieve is shown on this report part.

Chapter 5 : Appendix

Include samples of the work you did at the internship. Show a variety of work, which you did in your interne period. This include here will be determined by the kind of internship that you had.

CHAPTER 2
ORGANIZATION

2.1 Introduction

RMM IT SOLUTIONS LTD. is a new software firm on a mission to create brilliant software's, websites and blazing fast browser based applications. The spectrum of this company was started in 2010. I provide an end to end service, including customized software, business automation, website appraisal, project management, website development, website update and maintenance, search engine optimization and web marketing, e-Commerce – to name just a few. By removing the borders and boundaries, which usually keep brilliant, people apart, our teams provide an uncompromised talent pool from which to select the most suitable individuals. Through this unique approach, I offer creative, distinctive, and effective solutions to build competitive advantage and value for businesses of any size. All this is complex, but it couldn't be simpler for you Our experienced IT consultants provide a single, local point of contact and act as advocates for your project, selecting suitable team members, drawing up schedules and guiding our significant resources to action. What is more, I practice development transparency, making work logs, work in progress previews, schedules and other development information available in real time via our client portal. RMM IT SOLUTIONS LTD. closely monitors latest industry leading technologies, software updates and security patches and offers most reliable secured and effective solutions for your organization that definitely beat most of our competitors, with vastly superior customer service and production quality. I enjoy repeat business from almost every client I have worked with.

2.1.1 Services That I Provide

As a total IT firm in Bangladesh, RMM is capable to afford its customers almost any kind of IT services. Our highly skilled team in various sectors presents you with customized solutions that best fit your business and technology needs. RMM Includes following services

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2.1.2 Business Automation

Office Automation or Business process automation is the process a business uses to contain costs. It consists of integrating applications, restructuring labor resources, and using software applications throughout the organization.

2.1.3 Custom Software

Total business or office automation is worthy. However, sometimes it is not that much cost effective for small or medium sized organization or you may face problems with current installed software in your organization. In that case, you need custom software that only best fit with your organization. I are happy to do this custom development only for you.

2.1.4 Mobile Applications

It is so obvious that future of web is totally depends on mobile devices. I can develop mobile applications for iPhone and Android.

2.1.5 Web Applications

Web application includes efficient website to complex business application. In today's world most of the complex desktop software comes in the form of web application. It gives you the freedom to run your application while you are not even connected with your office intranet.

2.1.6 E-Commerce Solutions

In this web era, you can even run a business without having your own physical office. Everything is virtual now. You can display your products online, even sell, and collect revenues online via your website and our ecommerce solutions always give you the latest technological service for your business.

2.1.7 Technologies used at RMM

C++, ASP.NET, PHP, Perl, JavaScript, HTML, CSS, JAVA

2.1.8 CMS

Open cart, WordPress, Joomla, Drupal,

2.1.10 Server Platforms

Linux, Mac OS X and Windows, android, iOS

2.2 Product & Market Situation

In this web era, you can even run a business without having your own physical office. Now a day e-commerce has become very popular in Bangladesh. You can display your products online, even sell, and collect revenues online via your website and our e-commerce solutions always give you the latest technological favor for your business.

2.2.1 Developing Network

Now a days everything is becoming digitalized by using software. For that RMM IT SOLUTIONS LTD. is working. I get there ideas and create software for them. So the efficiency of their work becomes easier both physically and virtually.

2.3 Target Group

At RMM, I put customers first, and I believe putting them first is the only thing I need to do, as everything else will follow automatically. Thus for great user experience I put our best effort on what I do for.

Our Client's means "Growing Together". Therefore, I offer our clients in a very distinct way.

Our target group of customer's are-

- IT sectors
- Digital Marketing
- Web development
- App development
- Product Research
- E-commerce site

2.4 SWOT Analysis

SWOT Analysis is a useful method for understanding your Strengths and Weaknesses, and for detecting both the Opportunities, open to you and the Threats you face. Usually, it is used to examine the business as a whole, for capability as an enterprise.[1]

Every organization has its own perspective. Strong planning and good team work is the main priority of building a better organization. RMM IT SOLUTIONS LTD. has its own strength, weakness, and opportunities and as usual threats that every company face. These are the attributes actually. So I provide you what I did in our company and what makes our company well established, here goes-

2.4.1 Strengths

We are able to response very quickly as I have no red tape, and no need for higher management approval. I build good skills for our employees to make our company strong. I have suitable team members who are very talented and competitive. I are able to give good customer care, as the current small amount of work means I have plenty of time to devote to our clients. Our security system is very effective. I offer good value to our clients.

2.4.2 Weaknesses

Our company is totally a startup company. So our company has little market presence. So I try to make good reputation both locally and globally. I have a small staff with a few skill. Therefore, I try to help them to increase their level best. I are vulnerable to vital staff being sick or leaving. The advertising and promotional cost of the RMM very low. It is an advantage for RMM competitors for grabbing easy market share.

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2.4.3 Opportunities

Our IT sector is increasing, with many future opportunities for success. I are trying to get talented people so that I can develop our IT industry.

We have small staff but very talented young people who works hard to build their career in web developing and designing sector. I now try to teach them to handle both markets in every possible way to fulfill their dream.

We try new technologies for establishing our projects. Therefore Our competitors may be go slow to adopt new technologies.

2.4.4 Threats

A small change in the focus of a large competitor might wipe out any market position I achieve -

- Competitors copying features or ideas.
- Appearance of new competitors.
- Changing customer needs.
- New laws or regulations.
- SPAM & unwanted advertising.
- Upgraded browser software.

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2.5 Organizational Structure

RMM IT Solution are set up in specific ways to accomplish different goals, and the structure of an RMM IT Solution can help or hinder its progress toward accomplishing these goals. The following figure 2.1 shown Organizational structure of RMM

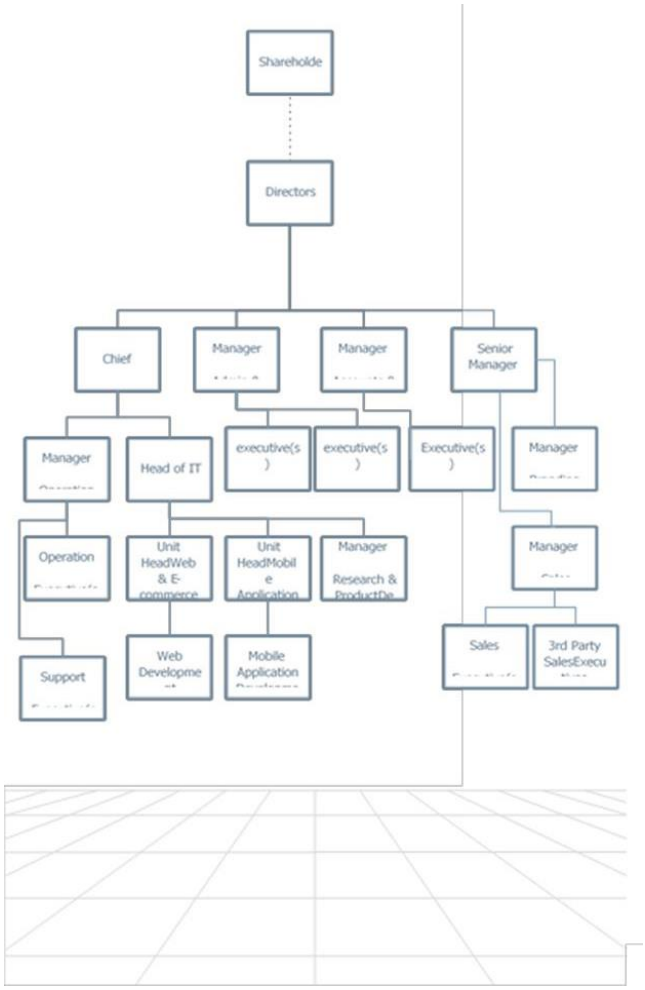

Fig 2.1 Organizational Structure

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CHAPTER 3
TASKS, PROJECTS AND ACTIVITIES

3.1 Daily Task and Activities

To make sure that I understood the problem and the client requirement fully. Manage content for websites. Finding a partial solution of that problem or requirement. Discussing the solution with the expertise before start the work. Keep in touch with the team leader always. Asking the team leader for help with any kind of problem related to the solution or project. The last but not least responsibility was to go to the office regularly and maintaining the timetable. At last, give report of my daily work to my project manager.

3.2 Event Task and Activities

RMM IT SOLUTIONS LTD. held meetings for skill developing their employees in every weeks. In their meetings they share there scholarly knowledge about IT industry. They describes the fact about many sector of IT sector. As they provide app development, e-commerce, social media marketing, digital marketing and last but not least web developing. In that even they describes me how to work with team and how to handle project and communicate with clients. Our Companies moto is -**"Growing together with clients"**.

We are web & IT developers. we mainly work to improve website development & IT development.[2]

For that our activities are-

- Customize website
- Server Set up
- Set up Networking
- Upgrade Contents of Website
- Use plugin to well-structured web pages
- Error check

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3.3 Project and Activities

As RMM IT SOLUTIONS LTD. provides IT development based work. My contribution was on on web development and networking of the current project of the company of to digitalize the city corporations of Dhaka North & South. I have learnt How to develop connection of server & set the networking between devices & how to connect them. Ive also learnt web development related works.

3.3.1 My Activities for this project

I have joined RMM IT SOLUTIONS LTD. as an IT developer & data analyst. The following things were included in my activity list

- Code in CSS (Cascaded Style Sheet),
- HTML (Hyper Text Markup Lang)
- Networking of the project office,
- Helping on server setup

I have learned how to install and configure the following programs

- To work with Packet Tracer
- Installation of xampp Server.[6]
- Installation WordPress and configuration. [4]
- To install WordPress plug-in. [4]
- To host a WordPress site using FileZilla tools.
- To install Open cart and its configuration.[5]
- Change database URL using notepad ++ tools.

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After learning above mentioned programs and language codes, I was assigned to do following task until I finish my internship period at RMM IT SOLUTIONS LTD.

- Customizing WordPress & Open cart themes and use theme website.
- Checking websites with multiple browsers.
- Hosting WordPress site & Open cart using FileZilla tools.

3.4 Challenges

The design & development industry is highly competitive, and to get ahead in the race, designers need to focus on being technical as well as strategic. Here are a few common issues that designers have to face during web design and development-

It starts with Website accessibility. A good developer must ensure that website not just can access across all over the world but properly functionalized.

Navigational Structure. which is one of the vital aspect for website. Website structure should be attractive and user friendly. Developer must ensure to provide proper navigational structure to the user.

Compatibility with browsers one of the major fact. Developer must ensure that website will run every browser platform for user need. It is one of the major challenge that developer face

Positioning of content. Website should be readable. Developer must choose easy content that user can understand.

Responsive is another major fact. Developer must ensure to responsive the website in every platform.

Errors. Developer must avoid incomplete input validation. Be careful to cross browser compatibility. Avoid such error developer must authorize correctly.

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CHAPTER 4
COMPETENCIES AND SMART PLAN

4.1 Competencies Earned

I started my interne as a web developer at RMM IT SOLUTIONS LTD.. In that process, I learn many things from my company. It gives me enormous joy that I learn something from that. It was all about practical experiences. What I learn is-

4.1.2 Languages and Tool's

- Cisco Packet Tracer
- HTML
- CSS
- PHP
- JavaScript JQuery
- CMS (WordPress & Open cart) My SQL

Besides, from practical work I also develop my personality & attitude throughout the whole process of my Internship. You can see, In web development industry clients are the main fact to handle. By building up the personality someone can easily communicate with client's and there requirement. Competencies I earned from there is- From the project of RMM IT SOLUTIONS LTD. I have learnt a lot of things which are-

- Ability to learn about practical field.
- Always maintain good quality of work.
- Always plan before doing any work.
- Organize the work properly Maintaining with teams.
- Communicating with clients.
- Strategical development of website.
- Build up professional skills.

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4.2 Smart Plan

During my internship, I had experienced lots of practical work. These practical works make me thing about my career. What would I do in future? Actually, Web development is an huge industry. Moreover, RMM IT SOLUTIONS LTD. is among them. My plan is –

- I will do a hosting business. Because every online business personality need this.
- I want to have my own company where I provide domain & hosting services.
- For that, I will recruit talented hardworking people. Those who will communicate with clients and keen to know market values of present and past days.
- I will grab the market situation for every single department, which will promote my websites.
- Updated technologies can be highly recommendable for any business purpose.
- At last, I want build strong personality by gaining more knowledge in this web development and design sector.

4.3 Reflections

RMM IT SOLUTIONS LTD. gives me a huge opportunity to prove myself in IT industry. From the support of my team member and other employee, I worked on websites using wordpress and developed networking on city corporation projects.

Main Tasks The most important work I have done while networking used packet Tracer. Using Along with command prompt I have configured & also monitoring the networks are working or not. I have also worked on installing the devices. [Fig 4.2]
Another main part is maintaining the connectivity that is required. [Fig 4.1]

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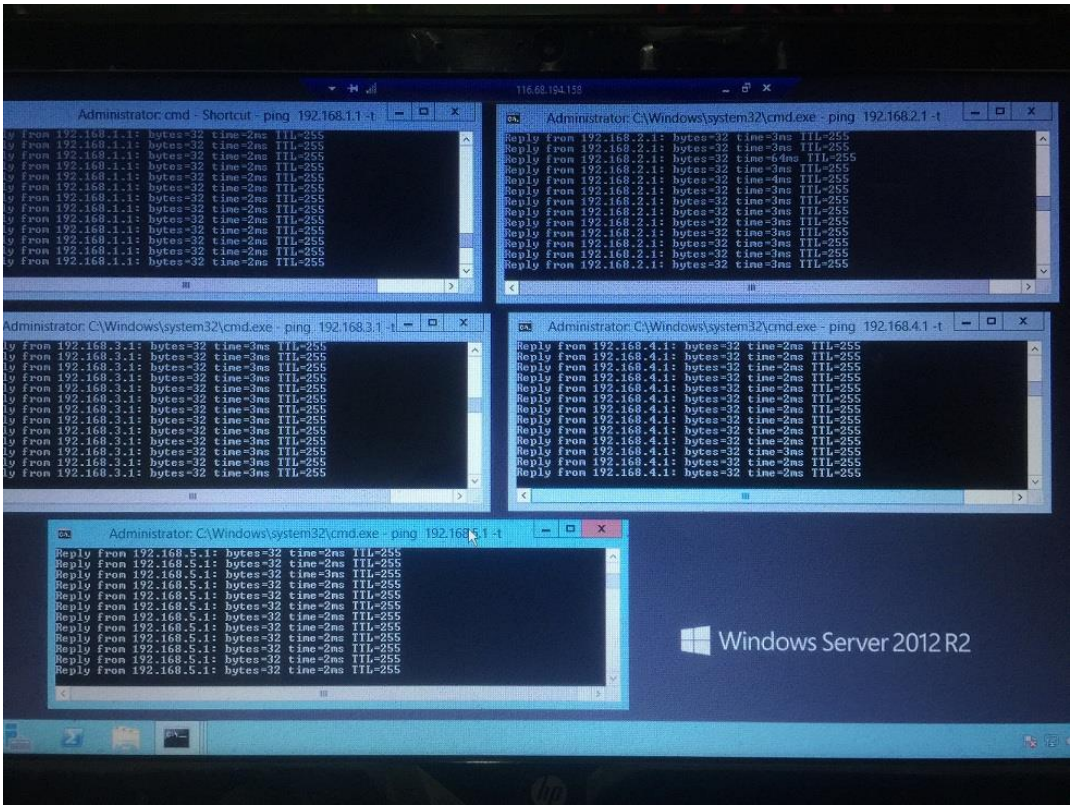

Fig 4.1.(a) ping Details.

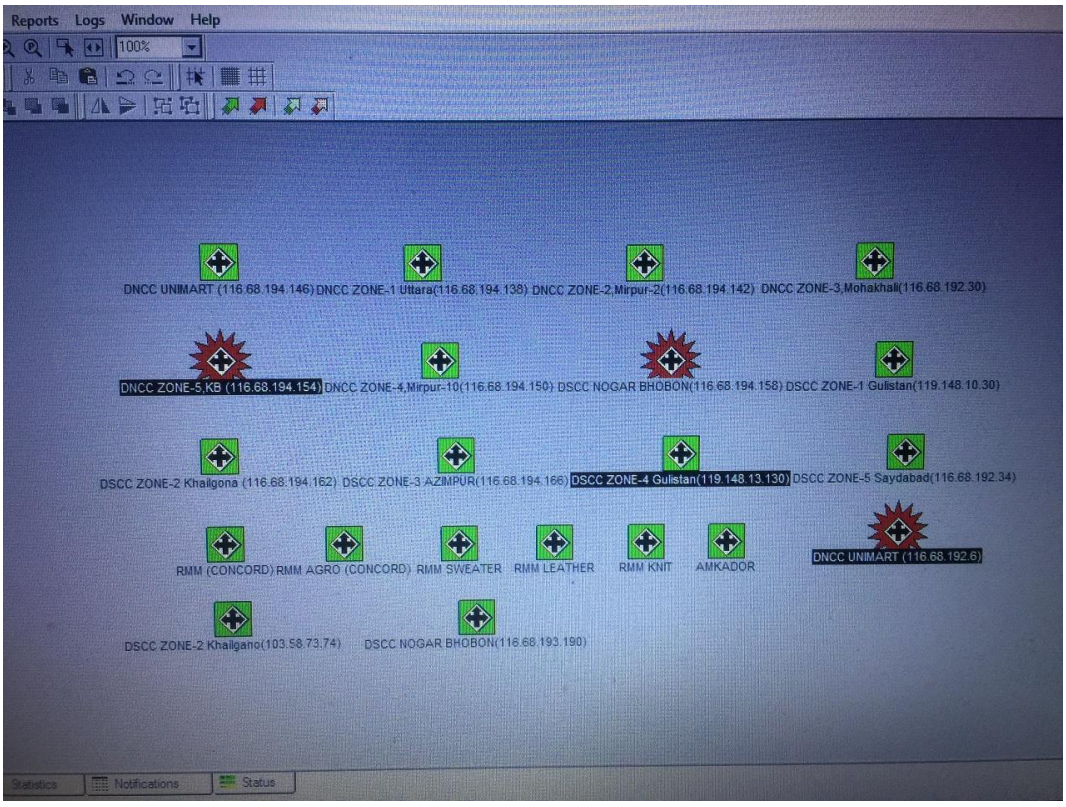

Fig 4.1.(b) Networking Details.

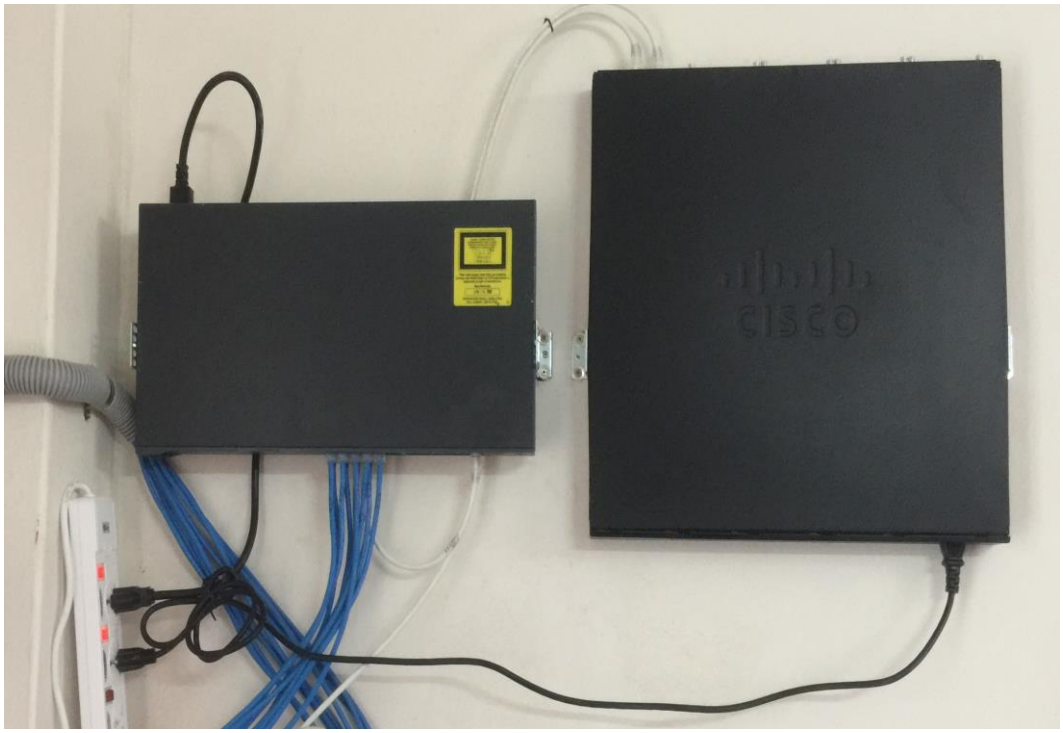

Fig 4.2.(a) Server Setup.

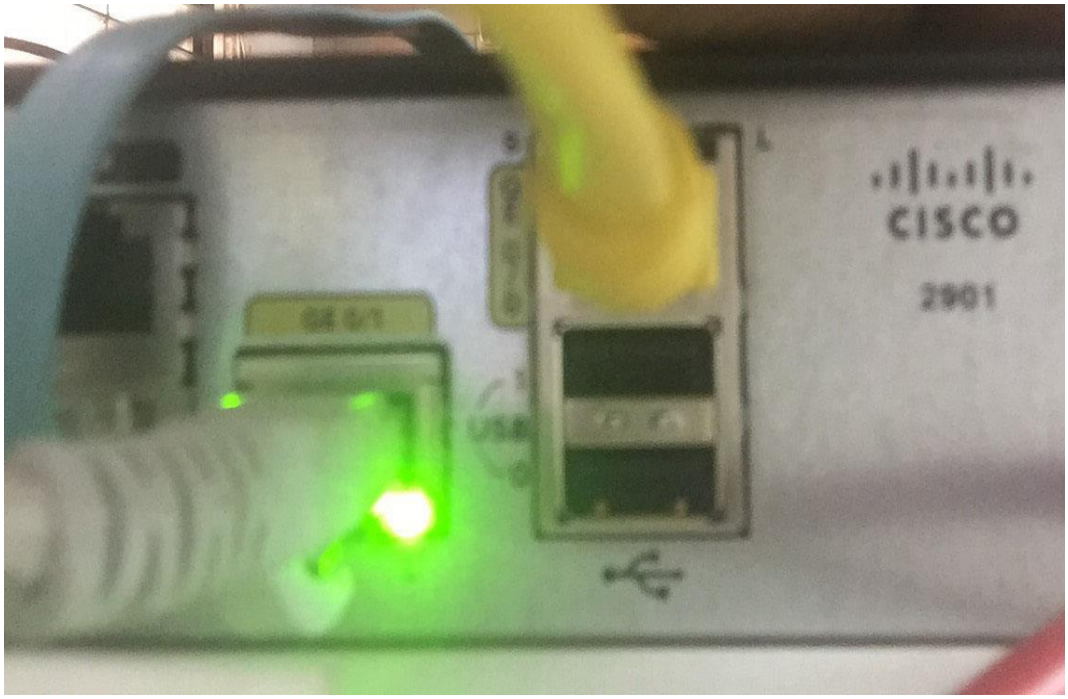

Fig 4.2.(b) Connected Working Device.

CHAPTER 5
CONCLUSION AND FUTURE CAREER

5.1 Discussion and Conclusion

I joined RMM IT SOLUTIONS LTD. an IT based software developing company, I started there as trainee IT developer. As a trainee I got chance to learn web developing related languages, use of different software's and their tools along with it expertises. Moreover, I was trained how to install those software and configure them according to the needs. When I completed my basic training, I was assigned to some projects. There I got chance to use and implement many types of plug-in and basic web designing knowledge.

Overall, I can say that the internship that I am discussing about is very useful for my IT-developing career; I have learned a lot and got chances to implement. It helped me to enrich me working in software-based company and learning about enterprise. Those experiences I gathered from the stated internship will surely help in near future in my career.

I would like to convey my thanks Faculty of Science & Information Technology, DIU for providing me an opportunity to gain idea of the competitive environment in the professional field. It has certainly elevated my web development skills in terms of design and coding. I now look forward to facing the upcoming challenges of the world.

5.2 Scope for Further Career

Web design & development is a promising career opportunity, which displays vast scope for interested candidates.

- Able to work on Software company.
- Can work as IT Developer.
- Can work as Web Designer.
- Can work as Software Engineer.

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[2] RMM services http //www.RMM.com/services , last accessed on 08-07-2017 at 11 am.

Platform that I worked on

[4] WordPress https //wordpress.org/ , last accessed on 10-07-2017 at 5.00 pm.

[5] Open Cart https //www.opencart.com/ , last accessed on 10-07-2017 at 5.20 pm

[6] Xampp Server https //www.apachefriends.org/index.html , last accessed on 10-07-2017 at 7.00 pm

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APPENDICES

APPENDIX AN INTERNSHIP REFLECTION

Administration of Web Application

1. HTML, CSS, PHP, and JavaScript Based Technology

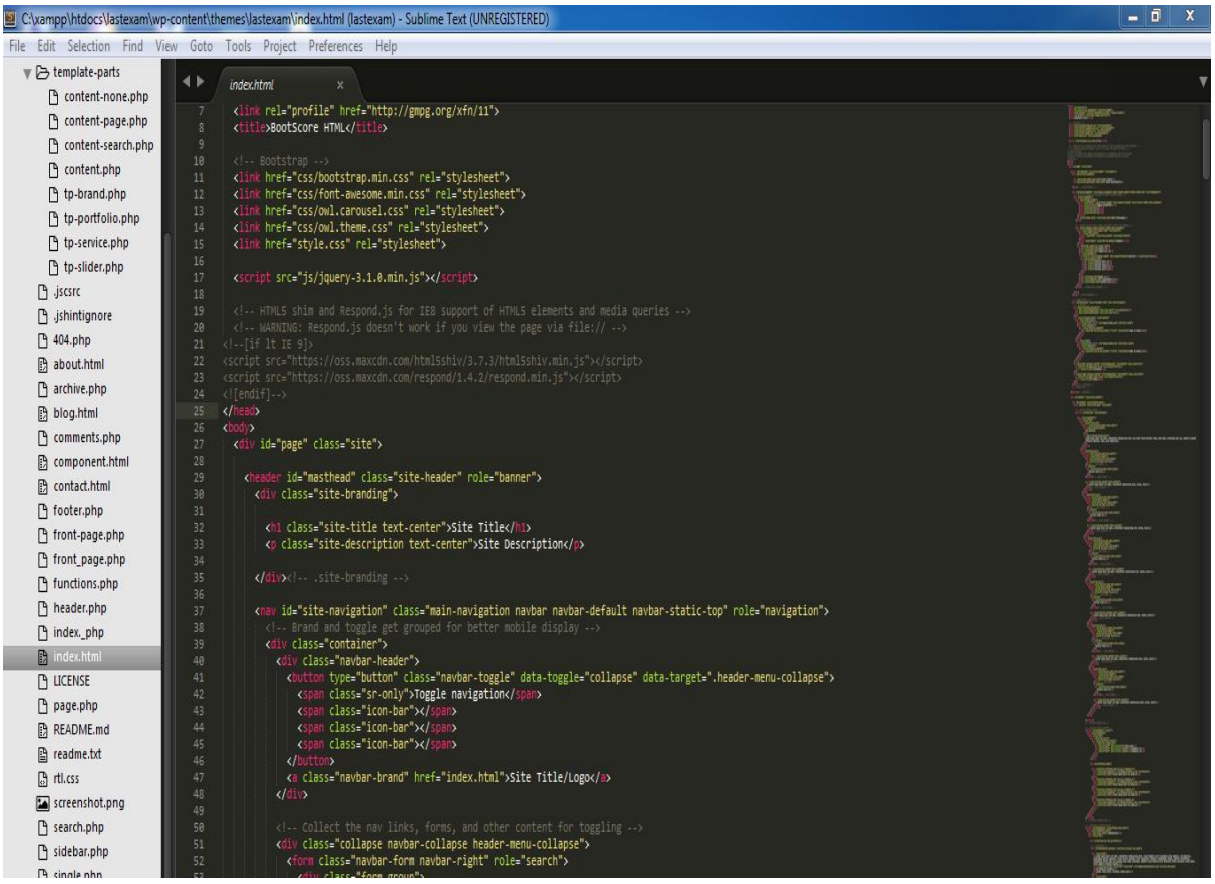

Fig A.1 Code Template

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2. XAMPP Control Panel

It is the most popular PHP development environment. XAMPP is a completely free, easy to install Apache distribution containing MariaDB, PHP, and Perl.

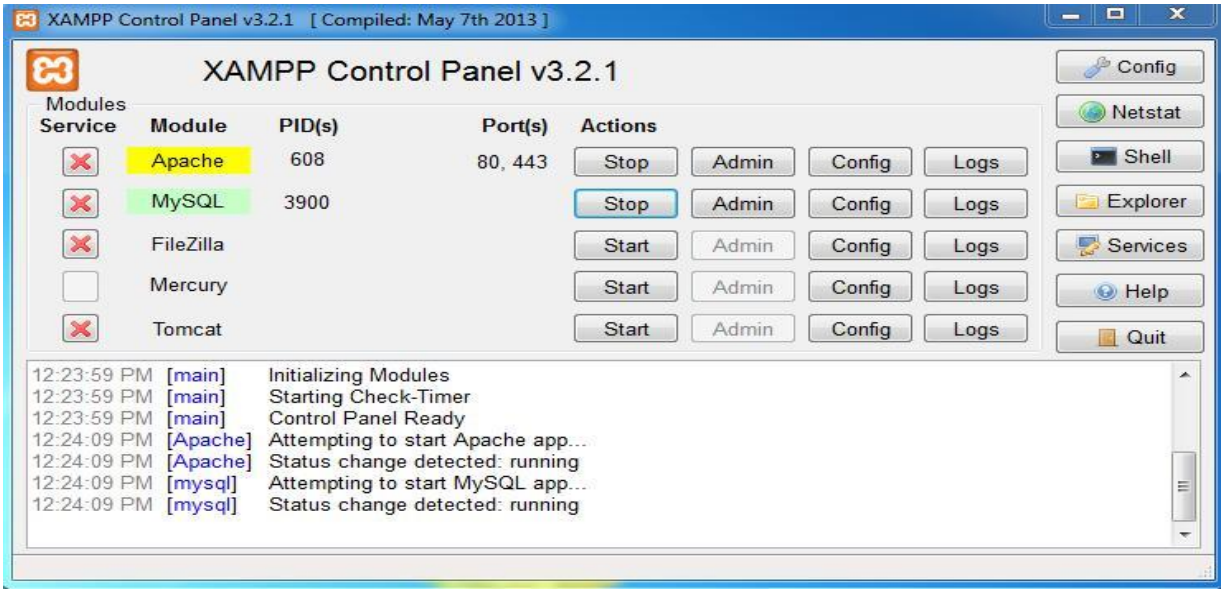

Fig A.2 XAMPP Control Panel

3. CMS (WordPress, Joomla & all Cart based ecommerce platforms)

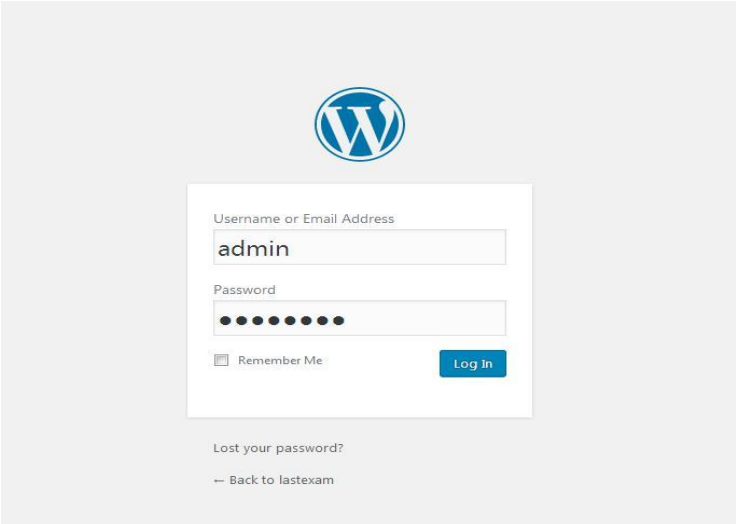

Fig A.3 WordPress Admin Panel

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4. WordPress Dashboard

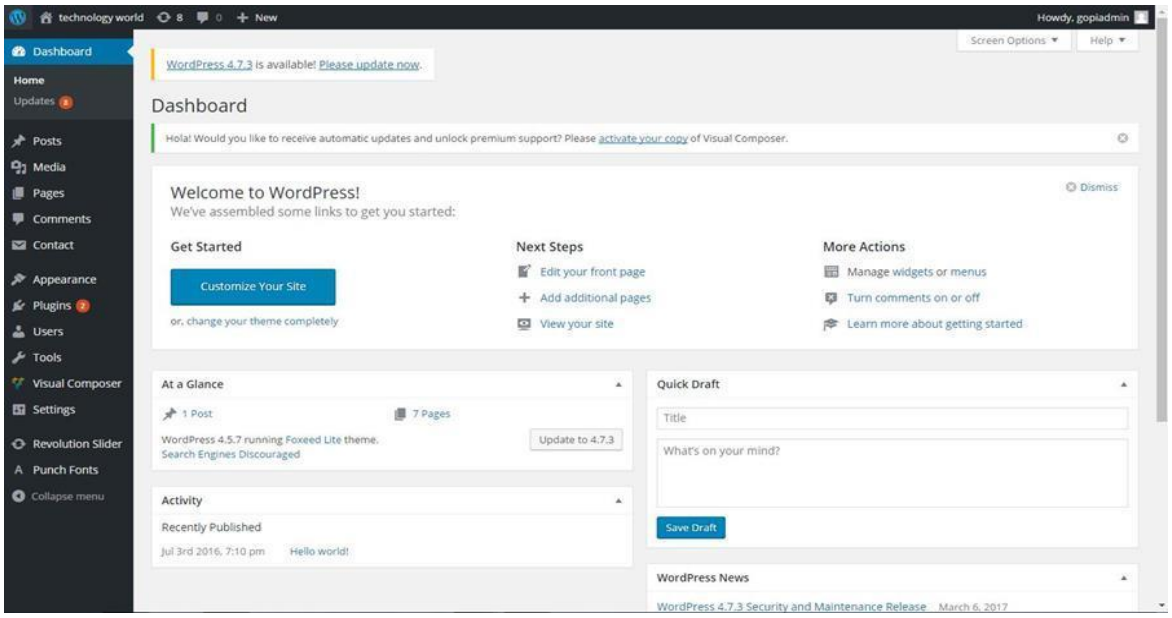

Fig A.4 WordPress Dashboard

5. Web Control Panel

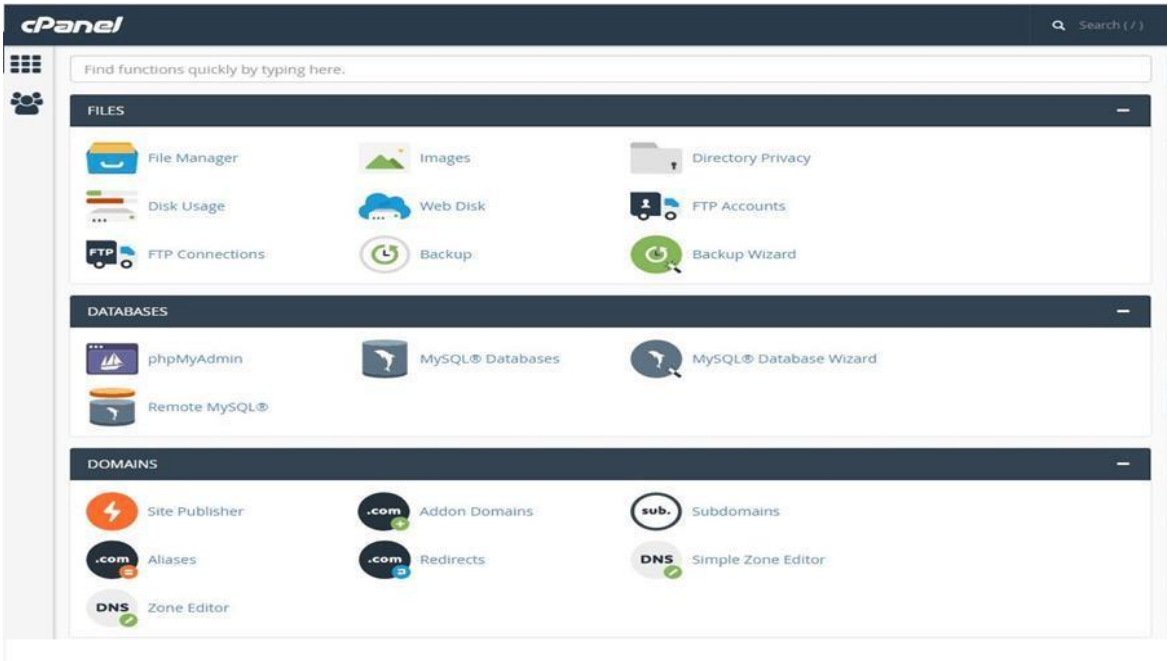

Fig A.5 Web Control Panel

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6. My SQL Database

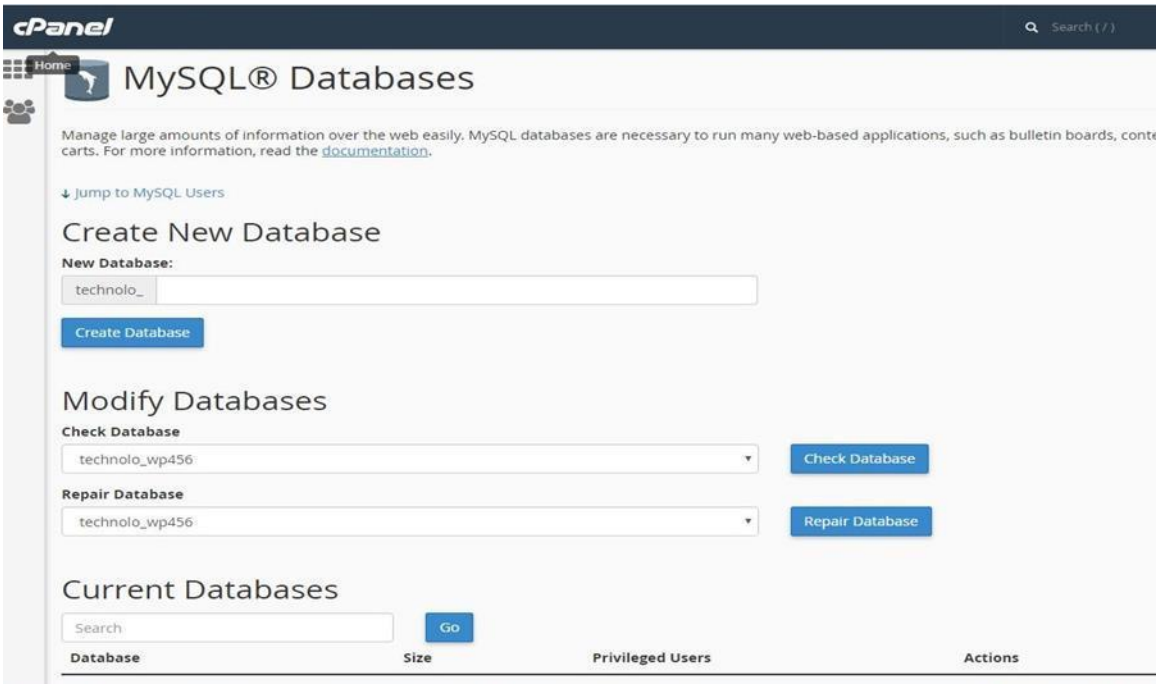

Figure A.6 My SQL Database

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APPENDIX B

COMPANY DETAILS

RMM IT SOLUTIONS LTD. is a group of professionals in Bangladesh, providing one stop solution to startups, fast growing and large businesses with Online Business Development & Consultancy services, E-commerce Systems Management platforms, Digital Marketing solutions, Daily Operations Management facilities & required IT Enabled Services, in today's techno paced world, which I believe are the major facts of business growth and success. I ensure these services to our clients with international standard, professional quality, and standard creativity.

RMM Provides-

- IT- Development
- Software Development
- Social Media Marketing
- Digital Marketing
- Website Development

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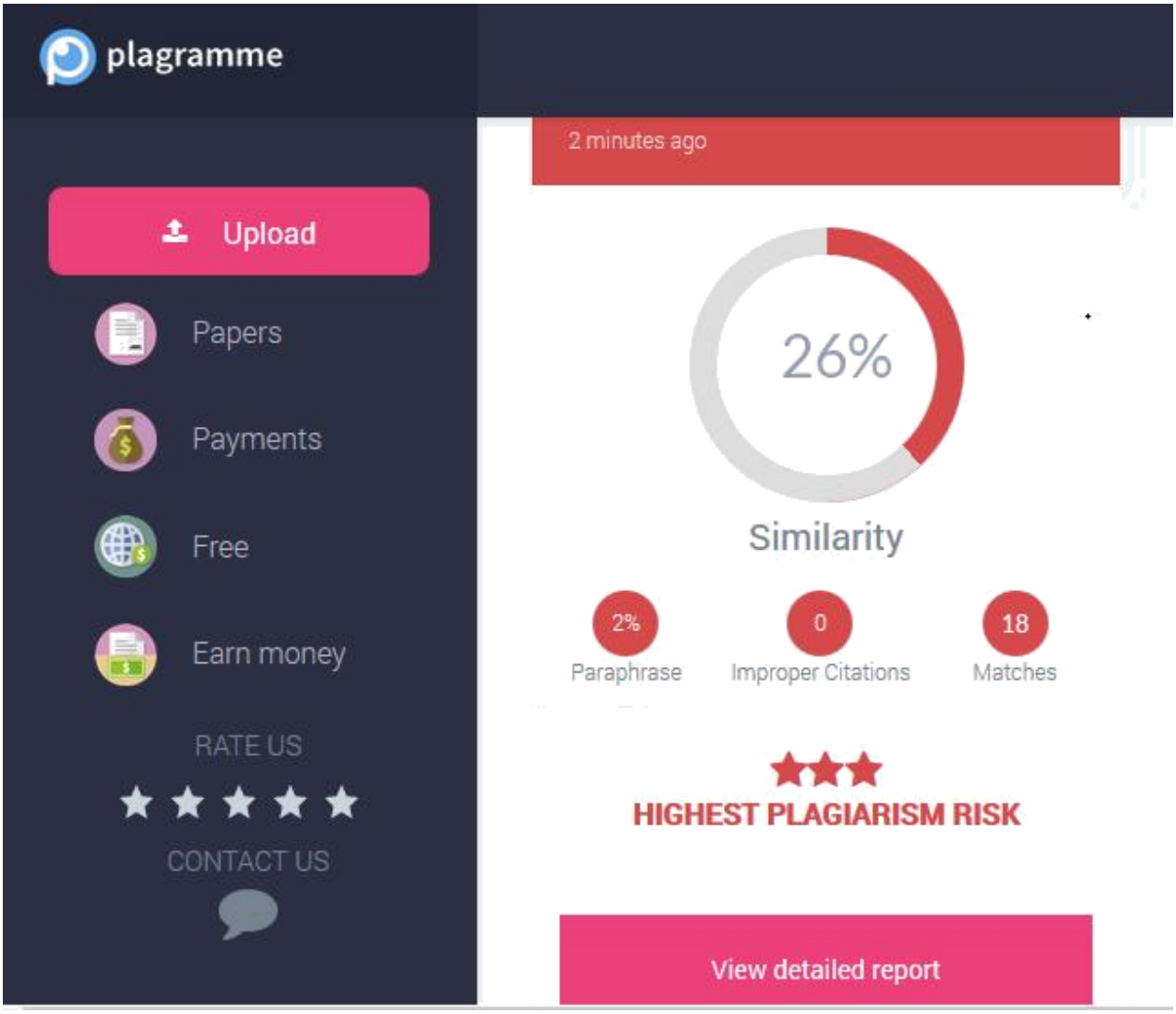

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