INTERNSHIP ON SOFTWARE TESTING AND SERVICES

 \mathbf{BY}

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This Report Presented in Shortly Fulfillment of Requirements for the Degree of Bachelor of Science (BSc) in CSE

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APPROVAL

This Internship titled "Software Testing Services", under spiral world, submitted by Salma Khatun to the Department of CSE, Daffodil International University (DIU), has been accepted as favorable fulfillment of the requirements for the degree of Bachelor of Science (BSc). The presentation has been held on 10th December 2018.

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DECLARATION

I am declaring that, the internship has been done by me, Salma Khatun, ID: 161-15-7362

under the supervisor of Rubaiya Hafiz, Lecturer, Department of CSE, Daffodil International

University. I also declare that no parts of this internship report disclose anywhere for award

of any degree. I also declare that, I collect information from Books, Internet and Onsite

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Finally, I disclose my respect to my parents, they help and supported me in every time when I feel disappointed in some reasons.

ABSTRACT

This report is written based on software testing that will help to improve a software or website quality. I think it will help students to grow his / her knowledge about software testing. It will also help teachers to teach students and student will be learned from it that what is the software testing and how it will work. This report has included various tools that will help to get quality of the website or software. During the starting time to collect knowledge of testing, what should student do, I include all of process what they need to do at first. For further learning I have included some references link which will help everyone to learn. There are some links that are refers to testing tools. I also gave an example of testing result that are expressing the quality of a website. I hope this report can be a direction indicator for beginning level of students or learners.

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CHAPTER 1 Introduction

1.1 Introduction

Now days the software testing profile is changing very quickly. Become efficient software testing experimenter for implement several types of applications and can detect it several ways. The software or website testing can be calculating in many ways by using several software testers. There is huge amount of tester are available into the online and we can use it to determine application are efficient or not. To be an experimenter in the testing field there are huge of career path we can choose which path is suitable for me. There is a particular person position to test software for user. I think it is a good career for me if I have a greater knowledge about it.

The following figure shows some options of software testing.

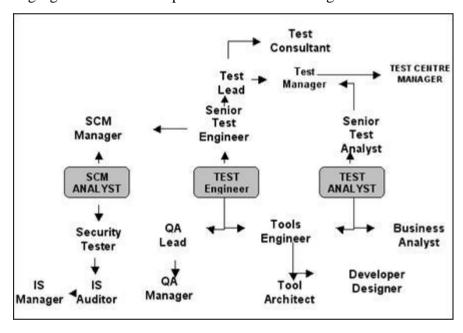


Fig. 1.1.1: Various options of software testing

As mentioned above, a Supply Chain Management Manager is able to interact with system. Test Manager is able to control senior test manager and test analyst. Test engineer are able to work with tools and maintain quality assurance. Test analyst is able to work with tools and maintain business, how it will more efficient. Tools engineer can develop design by using several ways. There are many testing purpose are available such as website availability, duration of page load, website traffic, content of website, rank of website etc. [2]

1.2 Motivation

I am studying my graduation in Computer Science Engineering at Daffodil International

University, I have realized the importance of acquiring real knowledge which will

complement theoretical knowledge and help me achieve greater perspective on my

future. During the internship I found that I was fully skilled in the details of effective

testing, regression testing, UX testing, consistency testing, integration testing, system

testing, geo testing, performance testing, website and web application testing, entrance

testing, test documentation, Test Management. I think I could gain the knowledge about

that I mentioned above.

1.3 Internship Objectives

The objectives of internship are to develop a student and grow her knowledge about

respective area of learning and to make up for fetch any types of real challenge. They

coordinate with real face of job market and give me practical academic training and

make comfortable to take any jobs.

1.4 Introduction to the Company

Head Office: 64/3 Lake Circus, Mirpur Road, Kalabagan, Dhaka - 1205

Type of Company: Public listed Company

Contact Us: Cell: +8801713493190, E-mail: secretary@daffodil-bd.com

Website Link: http://www.daffodil-bd.com

Established Year: 1990s

Subsidiary Companies: Spiral World [1], DIS, Dolphin Computers Limited, DSL,

Jobsbd.com, DIPTI

Associated Organizations: DIIT, DIA, Daffodil International College (DIC), BSDI,

DPI, DOL, Computer Clinic Limited

Brands of Company: DaffodilPC, processors, NIC, HDD, Memory, Keyboard and

Mouse, Mother Boards, Computer Accessories, Large and Small Printers, UPS, All

Software Products

Branches and Distributors of Company: Dhaka, Narayangonj, Chittagong, Cox's

Bazar, Comilla, Khulna, Bogra, Sylhet, Dinajpur, & Rangpur [8]

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1.5 Report Layout

In the chapter (1) I have described Introduction of internship, objective of internship, Motivation of internship and Production of the company.

In the chapter (2) I have described the Introduction of company, Product and Market situations, Target Group, SWOT analysis and gave a diagram of organization structure. In the chapter (3) I have described the daily task and activities, Events and Activities, Project task and Activities with broadly describe and gave some Challenges.

In the chapter (4) I have described the Competencies Earned, Smart Plan and Reflections.

In the chapter (5) I have described the Conclusion and Future Scope that I gained from the company, where I was learned internship. I also mentioned criteria of future scope.

CHAPTER 2

Organization

2.1 About the Company

Daffodil Computer Limited was established in 1990s by Md. Sabur Khan. Main business of this company is assembling, selling computers and software development, training and testing. This company is ISO certified and the no.1 brand is DaffodilPC. The mission of this company is delivering services of ICT and vision of this company is to arrive to the highest level of ICT. [7]

2.2 Product and Market Situation

Main product of this company is Assembling and selling computers and training with software development and testing. It comes first at them market in 1990 and began with conventional ICT training. In 1991 added some more computers, in 1992 added printers etc. In 2007 this company joint with software giant Britesoft, Malaysia to grow demand of software market. It was one of the first ICT companies that joint the foreign software company to grow demand of software market. So now Daffodil Computer Limited is growing as like as flying bird to get opportunity of highest level of ICT. At now market situation of this company is very well. [6]

2.3 Target Group

The main targets of this company are,

- To achieve goal, increased several path
- To gives intern facilities to student / learners.
- Manage training to develop knowledge about software testing

Contribute to different kinds of economical organization.

2.4 SWOT Analysis

There are some ways to SWOT analysis, [3]

- Balance the company with the external environment.
- Make competition oriented.
- Measure the weakness and threats
- Grow up Strength and opportunities

There are some objectives of SWOT analysis,

Strength: Medical Staff, Strong Commitment, Hospital Facilities, Healthcare Quality, Organizational Efficiency.

Weakness: Enough Resource, Lack of care, Shortage of staff

Opportunities: Growing community, Increase Community, Growing Healthcare programs.

Threats: Reduced government reimbursement, Increased Competition.

2.5 Organizational Structure

In following image is the structure of the organization [6, 7]

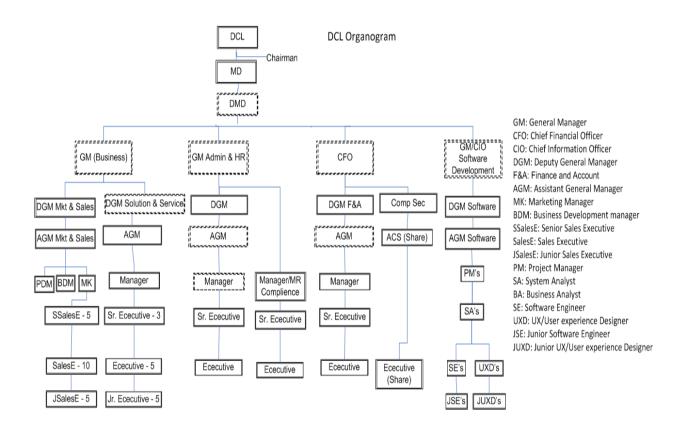


Fig. 1.2.1: Structure of Organization

CHAPTER 3 Tasks, Projects and Activities

3.1 Daily Task and Activities

In the 1st month, I have learned about the following testing,

- Website & Web Application Testing
- GUI Testing

In the 2nd month, I have learned about the following testing,

- UX Testing
- Regression Testing

In the 3rd month, I have learned about the following testing,

- Functional Testing
- Compatibility Testing
- Integration Testing
- System Testing
- Performance Testing
- Penetration Testing
- Test Documentation
- Test Management
- QA Consultancy
- Quality Assurance

3.2 Events and Activities

Meting Participation:

- To learn knowledge about decision making
- To take Opportunities to give some opinion
- To adaption with environmental behavior

Conference Participation:

- To increase self confidence
- To gather modern knowledge about technical / non-technical manner
- To achieve extraordinary opportunities

3.3 Project Task and Activities

There are several criteria that I have must collect and put the valid information for several types of website. In the following options is the activities of my project for individual website link.

3.3.1 Process of website testing

- First open a browser such as Mozilla Firefox or Google Chrome etc.
- Write <<https://www.uptrends.com/tools/uptime>> into the URL to go to
 calculate website status for an individual website.
- Now paste the website link that I have to calculate.
- In some few seconds later I will get my results.

In following is the measurement of a website status:



Fig. 3.3.1: website status for different region

In following is the broken links of a website:



Fig. 3.3.2: Broken linksout of 100

In following is the website load time for a particular website link:

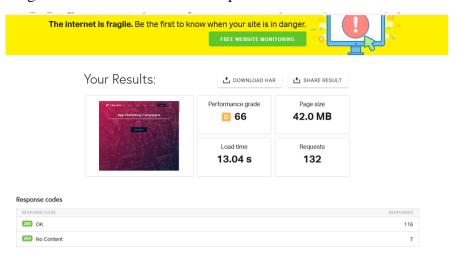


Fig. 3.3.3: website load time with total size of page

In following is the measurement of mobile friendless testing:

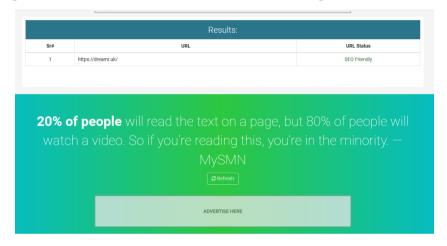


Fig. 3.3.4: Mobile friendless testing

In following is the measurement of a website SEO score:



Fig. 3.3.5: website SEO score

In following is the measurement of a google insight score:



Fig. 3.3.6: Google insight score of a website

In following is the measurement of a google mobile score:



Fig. 3.3.7: Google mobile score of a website

In following is the measurement of a google desktop score:

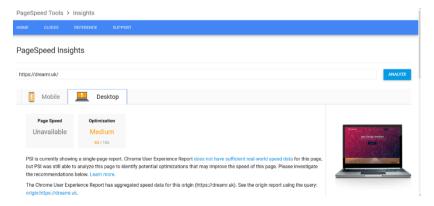


Fig. 3.3.8: Google desktop score of a website

In following is the measurement of a website performance:

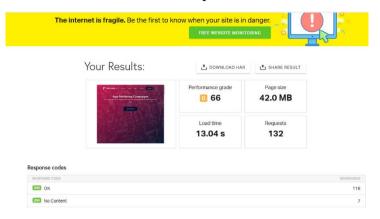


Fig. 3.3.9: website performance with page size

In following is the link with google plus page:



Fig. 3.3.10: Link with google plus page

In following is the measurement of google schema or micro data check:

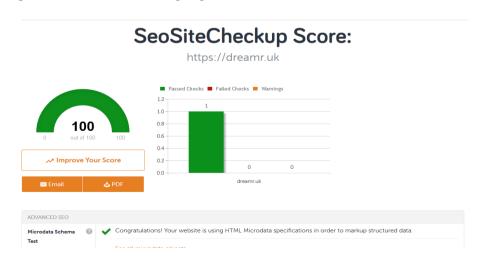


Fig. 3.3.11: Google schema or micro data check

In following is the calculation of google page rank:





Fig. 3.3.12: Google page rank of a website

In following is the google sand box of a website:

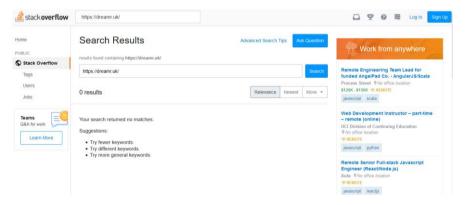


Fig. 3.3.13: Google sand box of a website

In following is the measurement of a website status: [21]

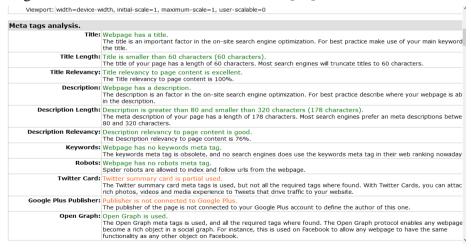


Fig. 3.3.14: Meta keyword of a website

In following is the finding robot Meta tag: [21]

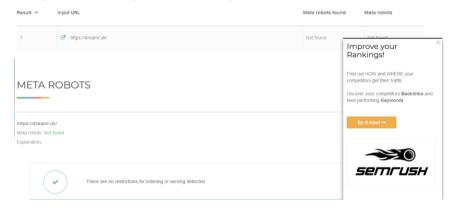


Fig. 3.3.15: Website robot meta tag

In following is the description of Meta data: [21]

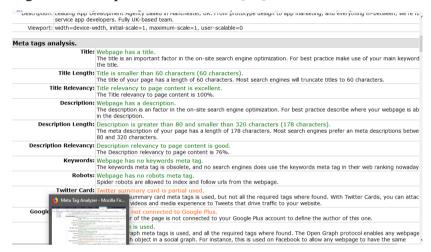


Fig. 3.3.16: Website meta data description

In following is the measurement of google search result:

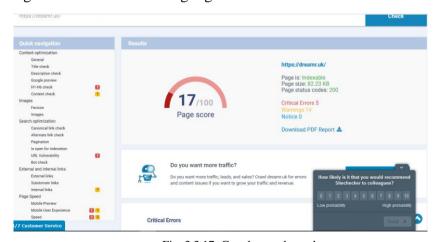


Fig. 3.3.17: Google search result

In following is the measurement of SEO friendly website link:

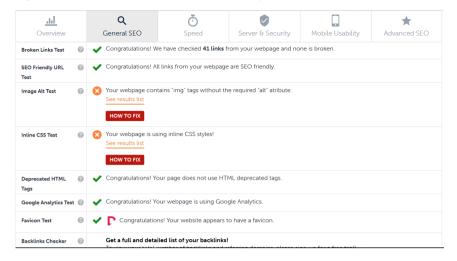


Fig. 3.3.18: Calculate SEO friendly

In following is the google analytic test:

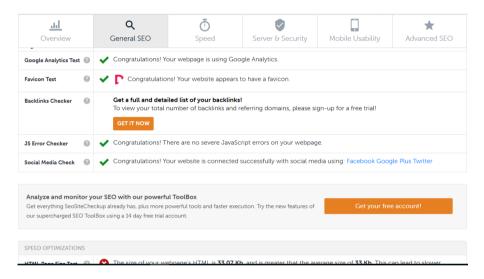


Fig. 3.3.19: Google analytic test measurement

In following is the measurement of a JS errors:

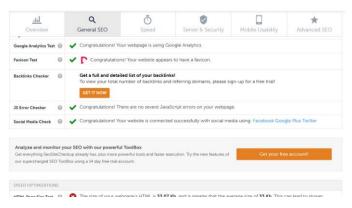


Fig. 3.3.20: JS errors measurement

In following is the measurement of bad request 503:

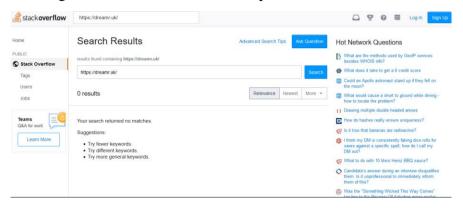


Fig. 3.3.21: Bad request check 503

In following is the social media check:

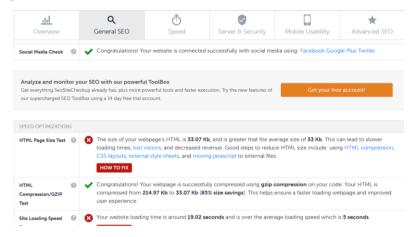


Fig. 3.3.22: Social media check for a website

In following is the measurement of a compression GZIP:

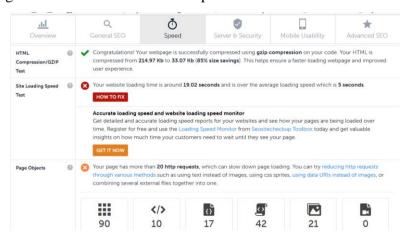


Fig. 3.3.23: Compression of GZIP

In following is the measurement of page cache:

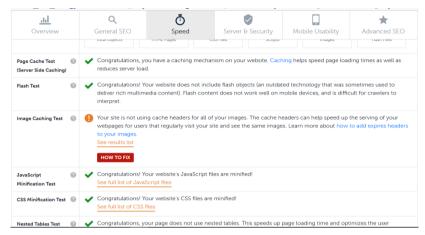


Fig. 3.3.24: Page cache test

In following is the measurement of image expires tag:

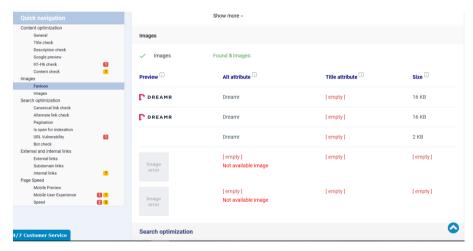


Fig. 3.3.25: Image expires tag

In following is the measurement of JS minification test:

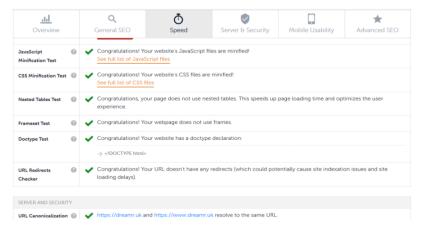


Fig. 3.3.26: JS minification test

In following is the HTML minifier:

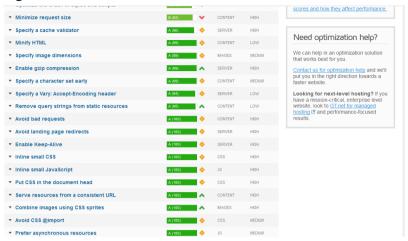


Fig. 3.3.27: HTML minifier

In following is the CSS minifier:

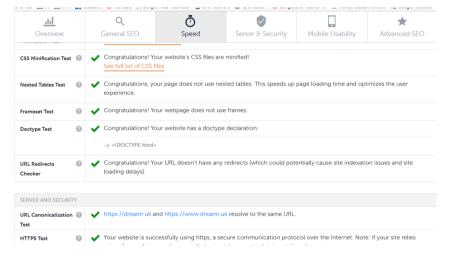


Fig. 3.3.28: CSS minifier

In following is the SPF record checker:

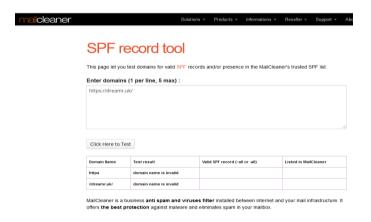


Fig. 3.3.29: SPF record check

In following is the measurement of page objects:

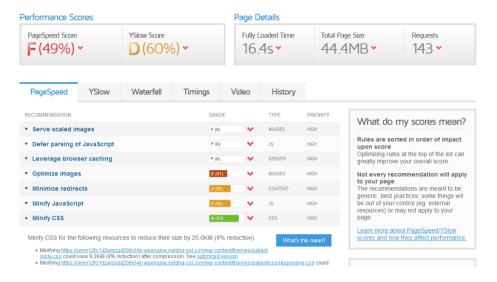


Fig. 3.3.30: Page object check

In following is the measurement of a website grade:

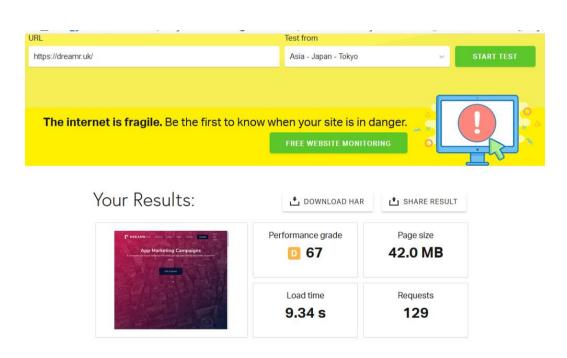


Fig. 3.3.31: Calculate a website grade

In following is the measurement of a website status:

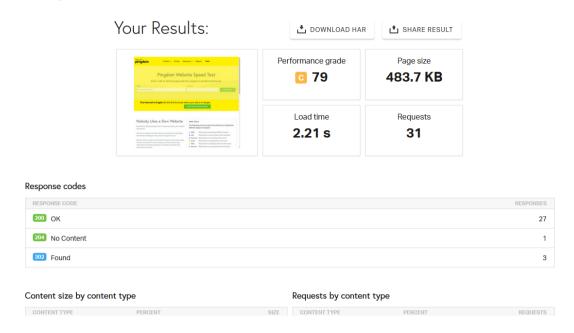


Fig. 3.3.32: Calculate a company grade

3.3.2 Example of website testing

Testing result of << http://dreamr.uk>>

- Website Status-Yes
- Broken links-43
- Website load time-13.04 s
- Website platform details -
- Mobile Friendliness Testing:80%
- Website SEO score– 100
- Google insight score- 100
- Google mobile score- 76
- Google desktop score-63
- Website performance-66
- Google Plus page: Yes
- Google schema or microdata check:100
- Google page rank: 10
- Google sandbox: no
- Meta Keyword: no
- Webpage has no robots Meta tag.

- Meta Description: The description is a factor in the on-site search engine optimization. For best practice describe where your webpage is about in the description.
- Google Search Results Preview: schematized
- SEO Friendly URL Test: yes
- Google Analytics Test: yes
- JS Error Checker: no
- Bad requests 503:no
- Social Media Check: yes
- Compression/GZIP: yes
- Page Cache Test: yes
- Image Expires Tag: yes
- JS minification: yes
- HTML minifier: yes
- CSS minified: yes
- SPF records checker: yes
- Disallow Directive Checker: yes
- No follow Checker: no
- Canonical Tag Checker: yes
- Media Query Responsive Test: yes
- Mobile screenshot:
- Page Objects:143
- Site loading speeds in seconds:5
- Favicon check: yes
- Website Grade Performance:67
- Company Grade:79

3.4 Challenges

After learning to my internship experience for four months I have found there are some challenges of during internship: [4]

• Sometime has no works

During workless time it was very boring.

• Sometime huge amount of works

It was very wonderful opportunity because huge amount of works can make me more efficient.

• The work completion

There is huge amount of difference between working in a group and client, working in a university and a company. In university time I can expand my time into laziness but into company I can't do that.

• Afraid of asking questions

It is one of the important things during internship because it can interrupt a great time.

CHAPTER 4

Competencies and Smart Plan

4.1 Competencies Earned

Competencies Earned or learning outcome is a partial report that mentioned what the expected demand of learner known, understand or be able to do as a result of a learning process. To make a website quality-full, find out which area of website is very week point to users and make an interactive solution to overcome it. Also gives services to user panel who will to make his own website errors free. That was the expected criteria that a learner need to know.

4.2 Smart Plan

A company can get a big opportunity when it has a smart plan or mission, because a vision only possible by smart plans and mission. [8]

4.3 Reflections

It is most important thing that company has a smart plan and mission. It makes a company cheerful to achieve the goal. Just like that Daffodil Computer Limited was also mission and pre plans that's why it could make to placed it position in a top position. Since many years ago, trying of this company gives the opportunities in present.

CHAPTER 5

Conclusion and Future Career

5.1 Discussion and Conclusion

I have gained practical knowledge about several testing that will help in future to get an opportunity. I have also learned work with under pressure and time management. When I have faced any problem of testing then I can solve it myself or by YouTube and Google. By using of YouTube and Google for collecting different solution make me more efficient, I think this internship was very wonderful experience and it will help me in my future life.

5.2 Scope for Further Career

- Functional Testing
- Regression Testing
- UX Testing
- Compatibility Testing
- Integration Testing
- System Testing
- GUI Testing
- Performance Testing
- Website & Web Application Testing
- Penetration Testing
- Test Documentation
- Test Management
- QA Consultancy
- Quality Assurance, etc.

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Appendices

> Appendix A: Internship Reflection

The purpose of my internship was gained a practical knowledge about testing manner and gather some behavior as like as a good leader. I have gained to learn how can I make a business organization / company and how can I manage it. I also gained how can I manage and motivate employees and importance of time management. Time management is more important to grow career in future life. This internship gave me some facilities like participate conferences to take a profession knowledge. I hope that I can use my knowledge as a leader.

> Appendix B: Company Detail



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