

**SOFTWARE TESTING & WEBSITE TESTING OF QUALITY  
ASSURANCE  
DAFFODIL SOFTWARE LIMITED(DSL)**

**BY**

**Md.Ezazul Islam  
ID: 153-15-6421**

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

Supervised By

**Ms.Umama Dewan**  
Lecturer  
Department of CSE  
Daffodil International University

Co-Supervised By

**Md.Swakshar Mahmud**  
Lecturer  
Department of CSE  
Daffodil International University



**DAFFODIL INTERNATIONAL UNIVERSITY  
DHAKA, BANGLADESH  
JULY 2018**

## **APPROVAL**

This Internship titled “**Software Testing & Website Testing of Quality Assurance**”, submitted by Md Ezazul Isalm 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 (BSc) and approved as to its style and contents. The presentation has been held on 31 July 2018.

## **BOARD OF EXAMINERS**

---

**Dr. Syed AktherHossain**

**Professor and Head**

Department of CSE  
Faculty of Science & Information Technology  
DaffodilInternationalUniversity

**Chairman**

---

**Dr. SheakRashedHaiderNoori**

**Associate Professor**

Department of CSE  
Faculty of Science & Information Technology  
DaffodilInternationalUniversity

**Internal Examiner**

---

**Md. Tarek Habib**

**Assistant Professor**

Department of CSE  
DaffodilInternationalUniversity

**Internal Examiner**

## DECLARATION

We hereby declare that, this Internship has been done by us under the supervision of **Ms.Umama Dewan,Lecturer, Department of CSE** Daffodil International University. We also declare that neither this Internship nor any part of this Internship has been submitted elsewhere for award of any degree or diploma.

### Supervised by:

---

**Ms.Umama Dewan**  
Lecturer  
Department of CSE  
Daffodil International University

### Co-supervised by:

---

**Md.Swakshar Mahmud**  
Lecturer  
Department of Computer Science and Engineering  
Faculty of Science & Information Technology  
Daffodil International University

### Submitted by:

---

**Md Ezazul Islam**  
ID:153-15-6421  
Department of CSE  
DaffodilInternationalUniversity

## ACKNOWLEDGEMENT

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

We really grateful and wish our profound our indebtedness to **Ms.Umama Dewan, Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of our supervisor in the field of “*Software testing*” to carry out this Internship. 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.

We would like to express our heartiest gratitude to **Dr. Syed AktherHossain,Professor and HeadandHead**, 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.

We would like to thank our entire course mate in DaffodilInternationalUniversity, who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

## **ABSTRACT**

Software Testing and Quality Assurance consumes at least 30 percent of budget and lot of time in Software Development Life Cycle (SDLC).

Companies spend so far as 10-15 percent of the annual IT budget fixing application problems in post deployment.

Addressing the issue of quality and costs at the same time is quite a challenge during SDLC and also during maintenance.

It is possible to reduce the cost of testing without compromising quality by outsourcing and off shoring the software Testing.

With many years of experience in software testing, DLAB is ideally positioned to address both issues of cost and quality.

We believe core challenges of software testing are in fully aligning tests cases and scenarios with true business requirements and creating correct test data, to ensure that there are no loose ends.

Rather than testing at the end, we help you focus on quality throughout the SDLC. We work with you as your extended team by implementing well defined delivery model.

We have flexible engagement model. We set up team within a short duration of time and use standard process for knowledge transfer. We establish good communication protocol including status review meetings and updates with agreed periodicity.

## TABLE OF CONTENTS

<b>CONTENS</b>	<b>PAGE</b>
Board of examiners	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
<b>CHAPTER</b>	
<b>CHAPTER 1: INTRODUCTION</b>	<b>1-3</b>
1.1 Introduction	1
1.2 Motivations	1
1.3 Internship Objectives	1
1.4 Introduction to the Company	2
1.5 Report Layout	3
<b>CHAPTER 2: ORGANIZATION</b>	<b>4-8</b>
2.1 Introduction	4
2.2 Product and Market Situation	4
2.3 Target Group	5
2.4 SWOT Analysis	6

2.5 Organizational Structure	8
<b>CHAPTER 3: TASKS, PROJECTS AND ACTIVITIES</b>	<b>9-10</b>
3.1 Training Attended	9
3.2 Appointed Responsibilities	10
3.3 Performed Tasks	10
<b>CHAPTER 4: SOFTWARE TESTING &amp; QUALITY CONTROL</b>	<b>11-22</b>
4.1 Definition	11
4.2 Why Testing	12
4.3 Participants in Testing	12
4.4 Some Recent Major Computer System Failures Caused by Software Bugs:	12
4.5 website testing	22
<b>CHAPTER 5: Competencies and Smart Plan</b>	
5.1 Competencies Earned	41
5.2 Smart Plan	41
5.3 Reflections	41
<b>CHAPTER 6: Conclusion and Future Career</b>	<b>42</b>
6.1 Discussion and Conclusion	42
6.2 Scope for Further Career	

## **LIST OF FIGURES**

<b>FIGURES</b>	<b>PAGE NO</b>
Figure 1: SWOT Analysis	7
Figure 2: Organizational Structure	8
Figure 3: SOFTWARE TESTING & QUALITY CONTROL	11
Figure 4: V-model	16
Figure 5: Testing using tools preview	27
Figure 6: Mobile preview	31



## CHAPTER 1

### Introduction

Today it is difficult to envision programming testing without the utilization of robotized instruments. Indeed, even with the best manual testing, various deformities and blunders are precluded. With each new and propelled adaptation of a product item, more highlights are required to be secured via robotized tests. This spares time and assets and enhances productivity of the completed item, guaranteeing on-time discharge deliverables. With computerized test apparatuses, testing is performed considerably quicker than it is regularly done by analyzers physically. This lessens expenses and discharge quality items on a more successive premise.

At the point when a product item is being created, even the gifted and skilled engineers are not ready to compose code with no blunders. This is the place programming testing comes and assumes the liability for guaranteeing full accuracy, unwavering quality, and high caliber of the created item.

To pick up a decent business notoriety and development, an organization should pay a riveted and consistent regard for the nature of their items.

### 1.2 Motivation

I am at show looking for after my Bachelors in Computer Science Engineering at Daffodil International University, I grasp the centrality of expanding reasonable data which will supplement the perusing material learning and help an understudy get a ©Daffodil International University

more broad perspective of the subjects. The IT engaged affiliations are outstandingly required Software testing to better Today an ever increasing number of cutting edge mechanized instruments going for giving utilitarian testing exercises show up in the test showcase. Anyway computerized testing possesses just 30% of all testing exercises, the staying 70% still have a place with manual testing. Along these lines to guarantee unwavering quality and best quality level of items both manual and robotization testing are basic.

Doing manual testing, an analyzer assumes a part of end-client. He doesn't utilize any robotization apparatuses, but instead executes different experiments and test situations physically to recognize startling conduct or imperfections. A decent analyzer is required to be extremely tolerant, mindful to points of interest, attentive, inquisitive, imaginative, and creative.

Manual testing (inverse computerization testing) permits getting all the more genuine bugs which a client can go over when utilizing a program. Hence manual testing is fundamentally imperative. That is the place we can encourage you.

### **1.3 Internship Objectives**

Extreme target of my temporary position program is to set myself up as a qualified one in the aggressive activity advertise. So this is extremely powerful of expertise improvement. I might want to accumulate some uncommon quality to give myself as talented one.

The temporary job in software engineering is intended to give work understanding while understudies are still in school, to organize work involvement with scholastic preparing, and to assist understudy with making the progress from classroom to work. Self inspired and self-guided a craving to work.

### **1.4 Introduction to the Company**

Daffodil Software Ltd. prides itself as one of the main across the nation Software Company in Bangladesh. They are the most experienced and most established organization in the ICT field where they are essential business morals is Long Term Relationship with they are clients. As we take a gander at the development throughout the decade since our beginning, they are greatly glad for what they have accomplished, and significantly more amped up for they are viewpoint for a similarly encouraging future.

It might satisfy you to realize that they began their activity in the year 2002. Amid the previous years, they expanded their activity and administration portfolio as indicated by the client's suggestion and thinking about requests of time. They worked with numerous national ventures and universal associations and accomplished the notoriety. They are utilizing the most recent advances and updating the administrations wherever it is required. Their Corporate Software Solution division is competent to give province-of-Web and Mobile Apps arrangements with a very productive specialized mastery gathering.

### **1.5 Report Layout**

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

**In the chapter (2)** I have portrayed the approach of my entry level position. What's more, this part gives the data about where the temporary job has been joined to embrace this program. Likewise included about how performed the temporary position functions, about the organization, what are the IT benefit offered in DSL and what are the parts of in employments market of Software testing.

**In the chapter (3)** I have portrayed the approach of my entry level position. What's more, this part gives the data about where the temporary job has been joined to embrace this program. Likewise included about how performed the temporary position functions, about the organization, what are the IT benefit offered in DSL and what are the parts of in employments market of Software testing.

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

**In the chapter (5)** I have described is Conclusion and Future Scope. I discuss Future Scopes of Software testing and write conclusion.

## **CHAPTER 2**

### **Organization**

#### **2.1 Introduction**

Daffodil Software Ltd. (DSL) is the brainchild of Daffodil Family to satisfy the correct request of utilization programming for existing and potential market and to achieve the Corporate Sector needs. DSL can be renamed as the "Ability to Achieve" an astute apparatus to which encourages our client to know its client, predict the fate of business and displaying. Customers from home and abroad are picking up business esteem from our items and administrations. DSL is controlled by a specialist administration group who are ensured by International Software Testing Qualifications Board (ISTQB). Our product items are executed, tried and recorded after universal standard and compliances.

We pay exertion in three parts programming supply, programming lifecycle administration and foundation arrangements. We endeavor to convey specialized help, data and critical thinking counsel of genuine incentive to our customers. DSL additionally offers venture consultancy, framework incorporation, application administrations, programming underpins, information passage and call focus answer for all level of clients.

Daffodil Software Ltd. is a custom programming administrations firm situated in Bangladesh with the Development and Support Office in Kuala Lumpur, Malaysia. We have broad involvement in numerous various regions of both programming advancement and equipment administration alongside frameworks combination. Our accomplished staffs of experts have worked with a wide exhibit of stages, dialects, and instruments throughout our different tasks.

#### **2.2 Product and Market Situation**

Daffodil programming compelled continues as an item firm to influence applications, to site, and custom programming others application. We know now day is a modernized development day. New creative energy things are open at unavoidably, that is striving for business focus. (DSL) Daffodil programming compelled is such affiliations that know how to make business focus. Site design fuses an extensive variety of expertise and

prepares in the creation and affirmation of destinations. The unmistakable parts of site structure join web visual delineation; interface arrangement; making, including unsurprising code and prohibitive programming; customer experience design; and webpage outline change. Every now and again various individuals will work in bunches covering unmistakable parts of the diagram method, though a couple of originators will stand up to them all. The articulation site engineering is customarily used to clear up the layout technique relating to the front-end (client side) plan of a site including creating increment. Site engineering not so much covers web working in the more broad degree of web progression.

### **Administration We Offer**

- Software Customization
- Data Migration and Porting Solutions
- 24/7 Technical Support by our proficient and expert specialized staff
- Timely compelling and predictable specialized help and effective experience
- Sample Training in various drew nearer. Preparing is given by first rate specialists on the web or lives nearby
- Software testing administration by ensured analyzer from ISTQB
- Comprehensive Consulting administrations for new and existing accomplices
- By Implementing programming our advisor guarantees most extreme results of your speculation at Daffodil Software Limited
- Graphics Design, Multimedia, Animation

- E-learning, Google, Module
- Internet TV, Internet Radio
- Software Testing Service
- Smart Card Solution
- Expertise of Social Media Marketing
- Google Ad words Analysis
- Web and E-trade Development
- All sort of documentation master
- Dedicated Export Team
- Search Engine Optimization

### **2.3 Target Group**

Any organization has an objective. Target is a piece of objective.

Target is the primary reality in any organization. Trustworthiness is the best thing for organization so you need to give best administrations in any customers and any organization.

We can do target top off help and oversee representative adequately to accomplish maintainable outcomes in our organization.

We need to progress our trip to high Situation try to duplicate/increment what they have - riches, abilities, impact, and their customer's business.

There are numerous business focuses on our organization streams this zone Education, Hospital, Clinic, Cement Industry, Lather Industry, Garments Industry, Real Estate Company.

Our organization attempts to growing up principle focus of upper level of our nation

## 2.4 SWOT Analysis



Fig: 2.1 SWOT Analyses

- SWOT Analysis is a valuable strategy for understanding your Strengths and Weaknesses, and for recognizing both the Opportunities open to you and the Threats you confront.

### **Strengths:**

Communication between individuals isolated by remove (at home and inside the work environment)

Working from home easily

Setting up an online business

Gathering data (important resource in business)

### **Weaknesses:**

New contestants disparage levels of aptitude expected to survive the market

Large wholes of cash required to set up organizations

Competition for little affiliates

Numerous estimating levies and administration choices

**Opportunities:**

Age structure of the populace evolving

Number of family units in the UK expanding

Introduction of easier taxes

Revision of administrative structure

**Threats:**

The Economic Crisis - Householders more averse to expand their Broadband memberships Stock Market's absence of trust in the advanced interchanges showcase.

It stays to be perceived how far purchasers can be convinced to grasp Internet get to.

**2.5 Organizational Structure**

Organizational Structure of Daffodil Online Ltd. Shown below in fig 2.5:





Figure 2.5: Organizational structure of Daffodil Software Limite

## **CHAPTER3**

### **InternshipRolesandResponsibilities**

#### **3.1TrainingAttended**

The short lived action undertaking where I have taken my Training is Daffodil Software Ltd. Daffodil Software Ltd. (DSL) is the brainchild of Daffodil Family to satisfy the correct request of use programming for existing and potential market and to achieve the Corporate Sector needs. DSL can be renamed as the "Ability to Achieve" an astute device to which encourages our client to know its client, predict the eventual fate of business and demonstrating. Customers from home and abroad are picking up business esteem from our items and administrations. DSL is controlled by a specialist administration group who are ensured by International Software Testing Qualifications Board (ISTQB). Our product items are actualized, tried and reported after universal standard and compliances.

We pay exertion in three parts programming supply, programming lifecycle administration and framework arrangements. We endeavor to convey specialized help, data and critical thinking guidance of genuine incentive to our customers. DSL likewise offers venture consultancy, framework mix, application administrations, programming underpins, information section and call focus answer for all level of clients.

Predominance gathering Month - 1 In the principle month of passage level position on daffodil Software limited I have

- Web Application Testing
- Web Service Testing
- Database Testing
- Desktop Application Testing

- Component Testing
- Script Testing

Month - 2 In the second month of entry level position on daffodil Software constrained I have learned and played out the accompanying undertakings

Usability Testing

Functional Testing

- Black Box Testing

Month – 3 The most recent month of entry level position on daffodil Software constrained I have learned and played out the accompanying undertakings:

- Plug in check
- Some website checking

Month – 4 The last month of internship on daffodil Software limited. I have learned and performed the following tasks:

- Real work
- Test case design
- Report create

### **3.2 Appointed Responsibilities**

In an instruction division, gifted and experienced instructors are the most imperative issues to give

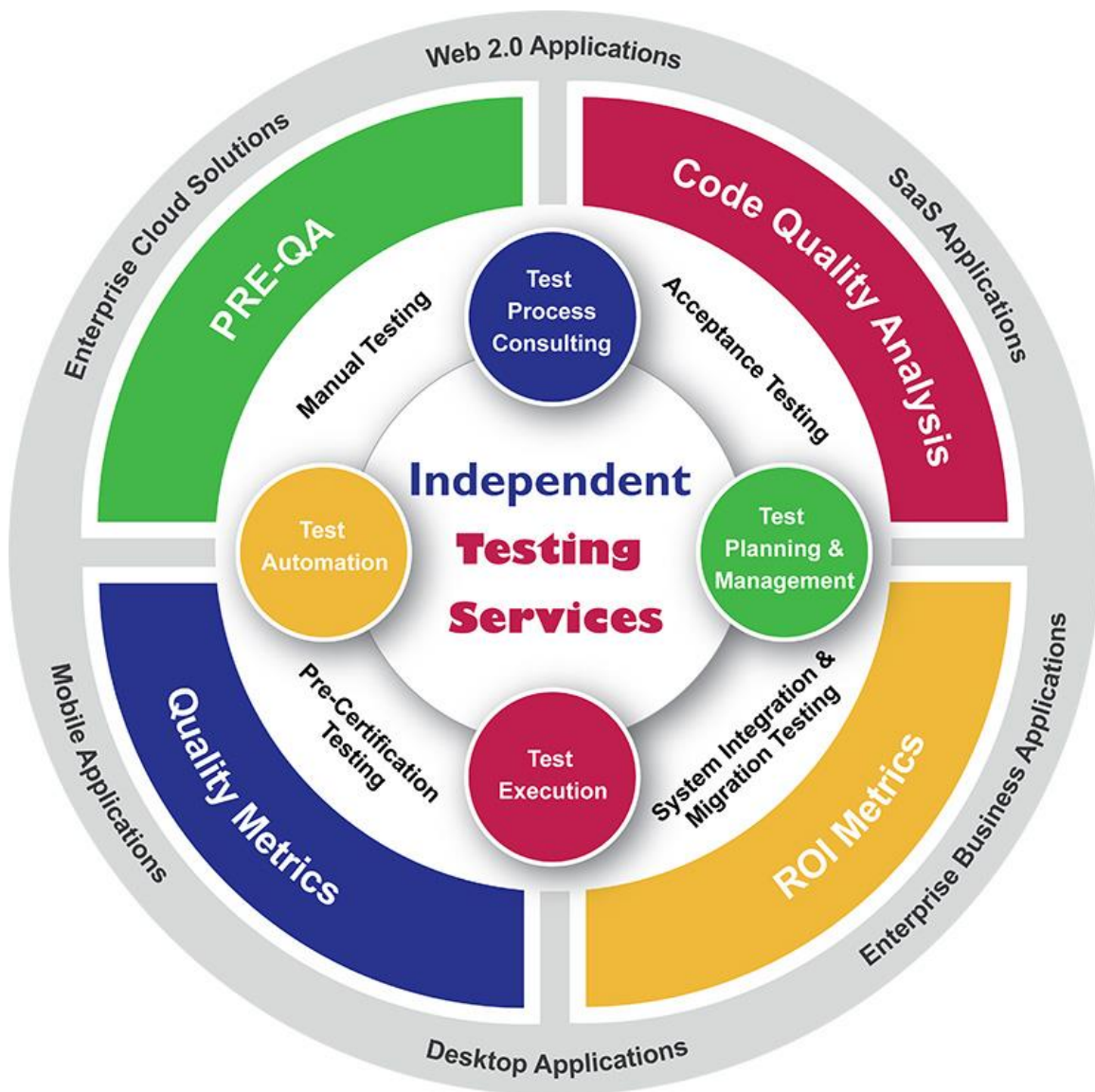
In an instruction division, gifted and experienced instructors are the most imperative issues to give quality training. DSL never trade off in such manner. Keeping in mind the end goal to have the best educators, DSL keeps up an efficient approach. To start with, the applicants need to sit for a composed test, at that point a meeting is taken. Finally, the competitor needs to give 2/3-showing class from which we take the input from the understudies. Lastly, the applicant is chosen or rejected. We generally give accentuation on the hopeful

### **3.3 Performed Tasks**

We pay exertion in three divisions programming supply, programming lifecycle administration and foundation arrangements. We endeavor to convey specialized help, data and critical thinking exhortation of genuine incentive to our customers. DSL likewise offers venture consultancy, framework reconciliation, application administrations, programming bolsters, information section and call focus answer for all level of clients.

## CHAPTER 4

### SOFTWARE TESTING & QUALITY CONTROL



## **4.1 Definition:**

•Testing is a procedure of assessing a framework by manual or computerization implies and confirms that it fulfills indicated necessities or recognizes distinction amongst expected and genuine outcome.

•Quality gives consumer loyalty to the first run through and unfailingly. It is the factor influencing an associations long haul execution and enhances profitability and intensity.

## **4.2 Why Testing?**

•Software testing is imperative as it might cause mission disappointment, affect on operational execution and unwavering quality if not done appropriately.

•Deliver quality programming items; fulfill client prerequisites, needs and desire.

•Uncover absconds before the items introduce underway, it can spare a tremendous misfortune.

## **4.3 Participants in Testing:**

- Software Customer
- Software User
- Software Developer
- Tester
- Information Service Management
- Senior Organization Management

## **4.4 Some Recent Major Computer System Failures Caused by Software Bugs:**

•According to news reports in April'04 programming bug was resolved to be a noteworthy commitment to the 2003 Northeast power outage, the most exceedingly terrible power framework disappointment in North American history. The disappointment included loss of electrical capacity to 50 million clients, constrained shutdown of 100 power plants, and financial misfortunes evaluated at \$6 billion. The bug was apparently

in one service organization's seller provided control observing and administration frameworks, which was not able accurately handle and write about a surprising intersection of at first confined occasions. The mistake was found and amended in the wake of looking at million of lines of code.

•In India September '04 Aircel Cell Company got a defect in their prepaid subscriber billing system. Result nearly one month we got all free outgoing. They found the defects earlier but correcting the defects itself it took long time. I don't have the exact official estimation of loss. But I made all ISD call nearly 100 hours free of cost.

•A programming bugs in a Soviet early cautioning checking framework about expedited atomic war in 1983, as indicated by news reports in mid 1999. The product should sift through false rocket location caused by Soviet Satellites grabbing daylight reflections off cloud tops, yet neglected to do as such. Fiasco was turned away when a Soviet administrator, in light of what he said was a '...funny feeling in my gut', chose the evident rocket assault was a false alert. The separating programming was revamped.

### **Unit Testing:**

- LLD
  - Module Testing
  - Individually Testing
  - White Box Testing
  - Developer job
- a. Test each module individually
  - b. Follow White Box Testing (logic of the program)

### **Joining Testing:**

- LLD+ HLD (Developer+ Tester)
- Communication+ Data Flow

- WB+ BB= Gray Box
- Integrate at least two module i.e. Impart between modules
- Follow a White Box (testing the codes)

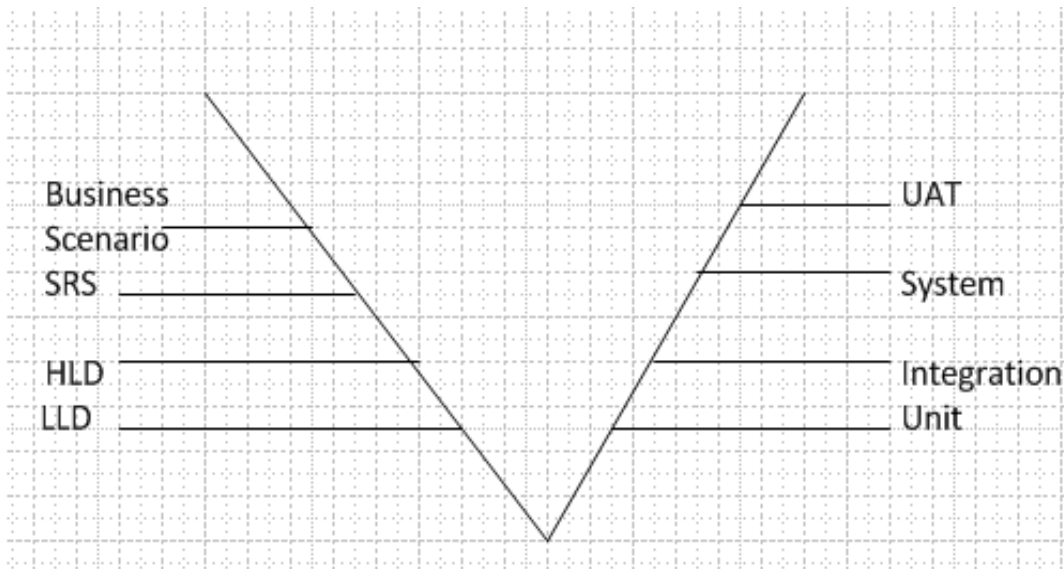
**Framework Testing:**

- Confirms that the framework in general conveys the usefulness initially required.
- Follow Black Box Testing
- Functionality Testing, Tester work

**Client Acceptance Testing:**

- Building the certainty of the customer and clients is the part of the acknowledgment testing stage
- It is rely upon the business situation
- Red Box Testing (critical)

**V-model**



### Testing Techniques:

- White Box testing – Statement scope, Condition, Decision, Loop, (code scope examination)
- Black Box testing
- Incremental testing
- Thread testing

### White Box Testing:

- Statement Coverage: Execute all announcements in any event once
- Decision Coverage: Execute every choice course in any event once

- Condition Coverage: Execute every choice with all conceivable result in any event once

**Discovery Testing:**

- Equivalence Partitioning
- Boundary Analysis
- Error Guessing

**String Testing:**

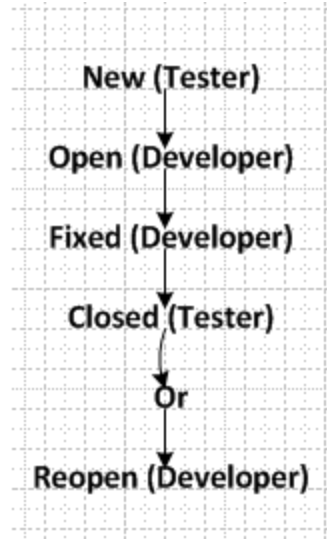
- A procedure frequently utilized amid early reconciliation testing
- Demonstrate key utilitarian abilities by testing a series of units that achieve a particular capacity in the application

**Criteria of Testing Level**

	<b>Entry Level</b>	<b>Exit Level</b>
Unit Testing	Base Code	Logic 100% complete
Integration Testing	Complete Unit Testing	Communication & data flow
System Testing	Complete Integration Testing	ER=AR
UAT	Implementation Software	Deliver to Customer
Regression	Anytime find defect	Solve the defect

**Bug Life Cycle**





Defect Tracking: All the fiddled test execution/imperfections will go under the imperfection following

**Defect Tracking Contains:**

- Defect ID: Sys\_Def\_xyz\_01
- Test Case ID: Sys\_xyz\_01
- Defect Description
- Status of Defect
- Reproducible
- Detected by whom
- Assigned to whom

Imitate: If designer requests to repeat any surrender analyzer ought to do that

**Test Cases:**

## Login

<b>Agent</b>	<input type="text"/>
<b>Name</b>	<input type="text"/>
<b>Password</b>	

## Flight Reservation, Mercury Interactive

ID	Description	Test Cases	ER	AR	Status
01	Testing "OK" button	Agent Name>4 chars & Password "mercury"	It should accept	Accepted	Pass
02	Testing "OK" button	Agent Name>4 chars & Password "mercury"	It should accept	Not accepted	Fail
03	Testing "OK" button	Agent Name>3chars & Password "mercury"	It shouldn't accept	Accepted	Fail
04	Testing "OK" button	Agent Name>3chars & Password "mercury"	It shouldn't accept	Not Accepted	Pass

### Defects Severity:

- Critical: It affects all the functionality
- Major: It affects only some functionality
- Minor: It is not affect any functionality

**Defects Priority:**

- High-Critical
- Medium-Major
- Low-Minor

## **4.5 Web Testing**

### **Functionality Testing:**

**Links:** Objective is to check for all the links in the website

- All internal links
- All external links
- All mail to links
- Check for browser links

### **Forms:**

- **Field Level Validation:** Check for the length, special character, numerical character etc.
- **Functional Checks:** Create, modify, view, and delete are working or not
- **Error Handling for Wrong Inputs or Actions:** Check whether appropriate error messages to be displayed
- **Optional & Mandatory Fields:** Mandatory field shouldn't be blank, optional field can allow the user to skip

**Cookies:** Check whether cookies are enabling, website use cookies to simulate a continuous connection to that size (it is the piece of information which is sent to the server whenever client establishes the connection)

**Database:** Data integrity should not be allowed that is missing or wrong data in the databases

### **Usability:**

**Navigation:** Navigation describes the way users navigate within a page, between different user interface controls (buttons, boxes, lists, windows etc.) or between pages via link.

**Check the following:**

- Application navigation is proper through tab
- Navigation through mouse
- Main features accessible from the main/home page
- Any hot keys, control keys to access menus

**Content:** Correctness is whether the information is trustful or contains misinformation. The accuracy of the information is whether it is without grammatical mistake of spelling errors. Remove the relevant information from your site. This may otherwise cause misunderstanding or confusion.

**General Appearance:**

- Page Appearance
- Color, Font size
- Frames
- Consistent design (not changing the contents)

**Server-side Interfaces:**

- Server interface verify that communication is done correctly, web server, application server, database server and vice versa
- Compatibility of server software, hardware, network connections
- Database compatibility (SQL, ORACLE etc.)

**Platform:** Check for the compatibility of Windows, UNIX, Linux, Solaris, and Macintosh

**Browser:** Internet Explorer (3.X, 4.X, 5.X)

## Netscape Navigation (3.X, 4.X, 5.X)

**AOL:** Browser settings (security settings, graphics, java etc.)

Frame and cascade style sheets, Applets, ActiveX control, DHTML, client

Side, scripting HTML specifications

### **Printing:**

- Text & image alignment
- Color of text, foreground & background
- Scalability to fit proper size
- Tables & borders

### **Performance:**

**Connection Speed:** Try with connection speed (14.4, 28.8, 33.6, 56.6, ISDN, cable)

Timeout occurrence

### **Load:**

- What is the estimated number of users per time period and how will it be divided over the period?
- Will there be peak loads and how will the system react?
- Can your site handle large amount of users requesting a certain page
- Large amount of data from users

### **Stress:**

- Typical areas to test are forms, logins or other information transaction components

- Performance of memory, CPU, file handling etc.
- Error in software, hardware, memory errors (leakages, overwrite or printers)

### **Security:**

- Valid & Invalid login
- Limit defined for the number of tries
- Verify log files are maintained to store the information for traceably
- Verify encryption is done correctly if SSL is used (system socket lock)
- No access to edit scripts on the server without authorization

**Logins:** In order to validate users, several sites require customers to login. This makes it easier for the customer since they don't have to re-enter personal information every time. You need to verify that the system does not allow invalid username/password and that it does allow valid logins.

- Is there a maximum number of failed logins allowed before the server's locks out the current user?
- What if the maximum failed login attempts are three and we try three, but then enter valid login?
- What are rules for password selection?

**Log Files:** Behind the scenes, you will need to verify that server logs are working properly.

- Does the log track every transaction?
- Does it track unsuccessful login attempts?
- Does it only track-stolen credit and usage?
- What does it store for each transaction? IP address? User Name?

**Measurements:** A measurements is a numerical number that demonstrates a connection between two factors.

Programming measurements are estimated that are utilized to evaluate the product, programming advancement assets and programming improvement process.

Metric: A quantitative measure of how much a framework, part or process pours a given quality.

Metric for the most part arranged into 2 composes process metric and item metric.

Process Metrics: A measurements used to gauge the normal for the strategies, procedures and instruments utilized in creating, executing and keeping up the product framework.

Item Metric: A metric used to gauge the normal for the documentation and code.

Client Participation: Use to discover the inclusion of the analyzer = User interest.

Test time VS Total test time

Way Tested: Extent of testing = No of way tried/Total no of ways.

Acknowledgment Criteria Tested: Extent of Testing = Acceptance criteria confirmed VS Total acknowledgment criteria

This metric recognizes the no of client distinguished criteria that were assesses amid the testing procedure

Test Standards and Quality Control: Two strategies we can take after for keeping up quality and benchmarks. One is according to client necessities and another is Standards.

Remotely models – commonality with and reception of distinguish test guidelines from association. Interior Standards-improvement and requirement of the test measures that analyzer must meet.

- Institute of Electrical and Electronics Engineers

### **TeastingUseing Tools preview:**



Secure | https://tools.pingdom.com

Apps Suggested Sites searchinternet-a.ak Sign in - Google Acc web design Media | XPLORE NET

**pingdom** FULL PAGE TEST DNS HEALTH LOG IN SIGN UP

## Pingdom Website Speed Test

Enter a URL to test the load time of that page, analyze it and find bottlenecks.

URL  Test from

Sign up for **free** to test your site every minute

State Colors About Pingdom

Yahoo Search - We Testing Tools Ret PageSpeed Insight Manual testing | S Daffodil software Daffodil Software Article Kewnter loc


Secure | https://developers.google.com/speed/pagespeed/insights/

Apps Suggested Sites searchinternet-a.ak Sign in - Google Acc web design Media | XPLORE NET

PageSpeed Tools > Insights

HOME GUIDES REFERENCE SUPPORT

## PageSpeed Insights


 Make your web pages fast on all devices.

Read about the [July 2018 Google Speed Update](#).

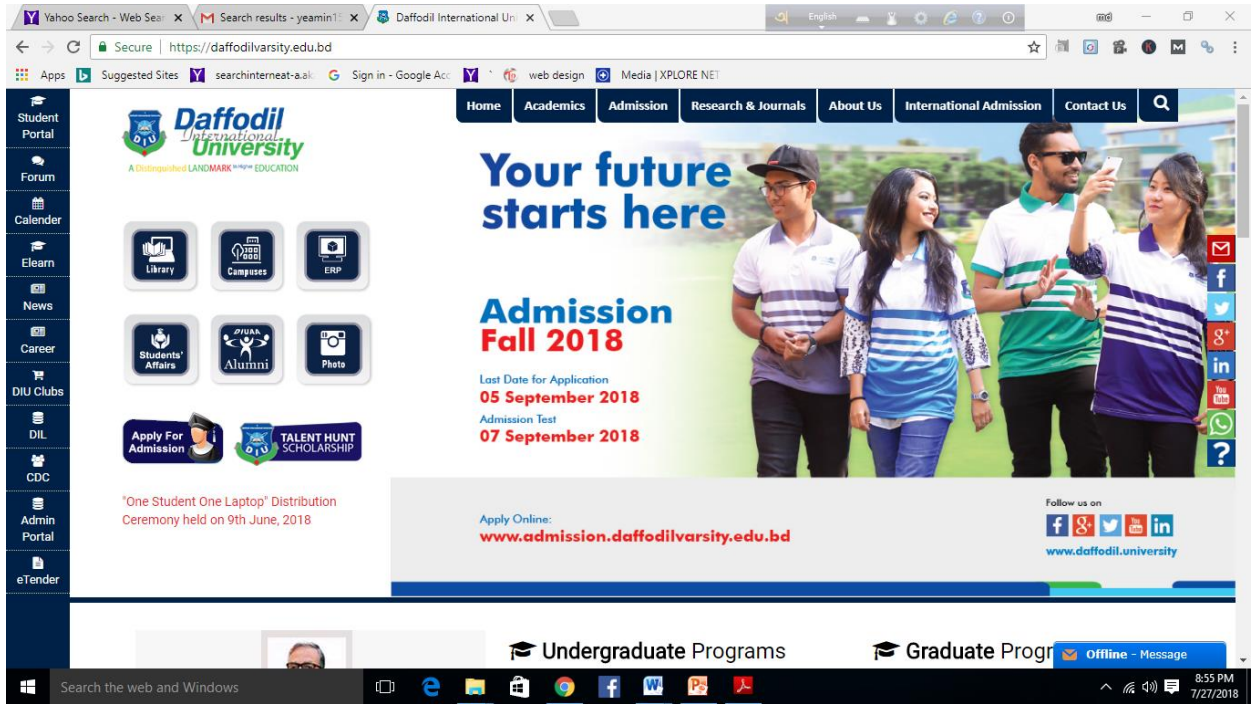
Web Performance [Learn more about web performance tools at Google.](#)

Give Feedback [Have comments or questions about PageSpeed Insights? Discuss on our mailing list.](#)

About PageSpeed Insights [PageSpeed Insights analyzes the content of a web page, then generates suggestions to make that page faster. Learn more.](#)

Search the web and Windows  11:00 PM 7/27/2018

## Example of Website Testing:



<https://daffodilvarsity.edu.bd/>

1. Website Status - Yes
2. Broken links - 137 broken
3. Website load time - 1.75 s
4. Website platform details - CMS : Joomla, Framework: PHP
5. Mobile Friendliness Testing : 90%
6. Website SEO score – 63

7. Google insight score - 53
8. Google mobile score - Speed :91
9. Google desktop score - 33
10. Website performance-83
11. Google Plus page :Yes
12. Google schema or microdata check : 0
13. Google pagerank : **6**
14. Google sandbox : no
15. Meta Keyword: Yes
16. Webpage has no robots meta tag.
17. Meta Description: daffodil university is a recognized private university in Bangladesh. Daffodil International University came into being on 24th January 2002, the University today combines impressive modern facilities and a dynamic approach to teaching and research with its proud heritage of service and achievement.
18. Google Search Results Preview : schematised
19. SEO Friendly URL Test : no
20. Google Analytics Test : yes
21. JS Error Checker: no
22. Bad requests 503 : no
23. Social Media Check :yes
24. Compression/GZIP : no
25. Page Cache Test :yes
26. Image Expires Tag :yes
27. Jsminification : no
28. HTML minifier :no
29. CSS minified :no
30. SPF records checker: yes
31. Disallow Directive Checker: yes
32. Nofollow Checker: no
33. Canonical Tag Checker: no
34. Noindex Checker : no
35. Media Query Responsive Test: yes
36. Mobile screenshot :



37. Page Objects: 214

38. Site loading speeds in seconds :5

39. Favicon check : yes

40. Your thought :

This is excellent website with very quick loading time, Google Plus page, Social Media Check, Meta Keyword, Mobile Friendliness, Media Query Responsiveness, and Favicon; along with lots of positive test results, but there are number of areas the site could do very well for example

- Escalating SEO score
- Improve Google desktop score
- Keep away from broken links
- Reducing CSS & HTML errors.
- Reducing object number to less than 10
- Required to improve Google insight score
- Minifying all the scripts
- Required website compression/GZIP, etc.

These improvements can significantly increase the website visibility on web along excellent customer satisfaction to browse the website.

We highly recommend the website to be more focus on mobile as mobile indicators do not show good results for the domain, which can hurt its SEO ranking, also large number of visitors those who view the website from a portable device.

41. Website Grade - Performance : B

42. Company Grade : A

## Automated Testing

**Introduction:** Manual VS Automation

<b>Manual</b>	<b>Automation</b>
Accuracy will not be high	Accuracy will be high
Cost Dependent	Initially it costlier but good in practice
Time Taking	Time taking will be less

**Benefit of Automated Testing:**

**Fast:** Automation tools executes test faster than human users

**Reliable:** Test performance the same operations each time they are runs thereby eliminated human errors

**Comprehensive:** We can build a suite of tests that cover every feature in our application

**Reusable:** We can reuse tests on different versions of an application even if the users interface changes.

## Introduction of Testing Tools

**Automated Test Tools:** The tools which are used only for testing is called as an automated tools

- **Functional Test Tools:** Win Runner, Silk Test, Astra Quick Test, Rational Robot
- **Performance Test Tools:** Astra Load Test, Load Runner, Silk Performance, Rational Load Test
- **Test Management Tools:** Test Director, Silk Suite, Silk Radar, Rational Test Management

### **Test Management Tools:**

- Managing entire test activity
- Creating test plan, test cases, defect tracking

### **Mercury Interactive:**

**Win Runner:** Used for functionality testing

**Astra Quick Test:** Used for functionality test (web)

**Load Runner:** Used for performance testing

**Astra Load Test:** Used for performance testing (web)

**Test Director:** Used for test management

### **Segue Software Inc.:**

**Silk Test:** Used for functionality testing (web)

**Silk Performer:** Used for performance testing

©Daffodil International University

**Silk Suite:** Test management tools

**Silk Radar:** Test management tools

**Rational Corporation (IBM):**

**Rational Robot:** Used for functionality testing

**Rational Load Test:** Used for performance testing

**Rational Test Management:** Test management tools

	<b>Mercury Interactive</b>	<b>Segue Software Inc.</b>	<b>Rational Robot (IBM)</b>
Functionality	Win Runner, Astra Quick Test (web)	Silk Test	Rational Robot
Performance	Load Runner, Astra Load Test (web)	Silk Performer	Rational Load Test
Management Tool	Test Director	Silk Suite, Silk Radar	Rational Management
Language	TSL (test script language)	4GL (4 <sup>th</sup> generation language)	SQA (software quality assurance)



## **Introduction to Win Runner:**

- Functional regression testing tool
- Window base application
- GUI based application
- Platform dependent
- Enterprise tool (which can be various types of application)

## **How Does Win Runner Identify GUI Objects:**

- GUI application are made up of GUI objects such as windows, buttons, lists, menus
- Rapid test script wizard learns the description of all the GUI object
- It saves the object description in “GUI map file”
- Recording
- Learn (GUI map editor)
- When we run task Win Runner uses this files to identify and locate object

## **How a Test Identifies GUI Object:**

- Win Runner identify each GUI object in the application beings tested by its physical description, a list of physical properties and their assigned values (label: ok, class: push button, height: 20, width: 12, x & y coordinates etc.)
- Their property value pairs appear in the following format in GUI map (property1: value1, property2: value2....)

For example the description of open window contains two properties class and label. In this case the class property has the value window while function label has the value open. (Class: window, label: open)

The class property indicates the objects type. Each object belongs to a different class, according to its functionality: window, push button, list, radio button, menu etc.

Logical Name: In the test script Win Runner does not use the fully physical description for an object. Instead of it assigns a short name to each object.

Function Logical Name:

- The logical name is the label that appears on an object
- For a button the logical name is its label such as “OK”.

Getting Started With Rapid Test:

- Spying on GUI objects (GUI spy)
- Help us to understand how Win Runner identifies GUI objects
- Recording:
  - a. Context Sensitive Mode
  - b. Analog Mode

Win Runner Testing Process:

- The GUI map is actually the sum of one or more GUI map file
- There are two modes for organizing GUI map files
  - a. Global GUI map file mode
  - b. GUI map file pretexts mode

Recording Tests: By recording we can quickly create automated test scripts, clicking objects with the mouse. Entering keyboard input.

It generates statements in TSL, mercury interactive test during script language.

Choosing the Record Mode: Before begin recording a test select the appropriate record mode.

Two records mode are available:

Context Sensitive Mode: In this mode records the operation we perform in terms of the GUI objects, Win Runner identifies each object click and type. Example: button\_press (ok)

Analog Mode: In analog mode, Win Runner records the exact coordinates traveled by the mouse and keyboard input. Example: mtype( “ <T110x L left> “); left mouse button press.

<b>Choose context sensitive mode if</b>	<b>Choose analog mode if</b>
The application contains GUI objects	The application contains bitmap area
Exact mouse movement are not required	Exact mouse movements required
You plan to reuse the testing in different versions of the application.	

### **Working With Win Runner:**

- Synchronization Test
- GUI Checkpoint
- Checking Bitmaps
- Checking Text
- Databases Checkpoint
- Data-Driven Tests
- Exception Handling
- Programming Test with TSL
- Batch Test

## **CHAPTER 5**

### **Competencies and Smart Plan**

#### **5.1 Competencies Earned**

Capabilities Earned or learning result is an announcement of what a student is relied upon to know, comprehend or have the capacity to do because of a learning procedure. Introduce and decommission of both system and server machines at two datacenters. Lead part in cutting edge Linux programming usage, for instance LDAP HA, adjusted to program learning results, field and temporary job assessments. The Student Association office reserves numerous understudy Intern Learning Outcomes: Gathering and arranging data into an Internship Project Description: Participate in the update of the Linux Lab site. Learning Outcomes. Introduce and Configure programming and redesigns; Install, arrange and test arrange Employer Services • Furthermore, steady with the learning results, the Internship On-Site Supervisor will give an introduction concerning authoritative approaches and methods.

#### **5.2 Smart Plan**

Every company should have a smart plan to gain the success. Basically some common things of combination create a smart plan.

#### **5.3 Reflections**

Daffodil Software Ltd. Begun they are task in the year 2002. Amid the previous years, they broadened they are activity and administration portfolio as indicated by the client's suggestion and thinking about requests of time. They worked with numerous national ventures and global associations and accomplished the notoriety. They are utilizing the most recent advances and overhauling the administrations wherever it is required. They are Corporate Software Solution division is competent to give condition of-workmanship system and media transmission arrangements with an exceedingly effective specialized mastery gathering.

## **CHAPTER 6**

### **Conclusion and Future Career**

#### **6.1 Discussion and Conclusion**

Audit this entry level position has been a brilliant and remunerating background. I have seen the future and I will have the capacity to assist me with the chance to programming with many individuals have possessed the

capacity to affirm that. Through this temporary position, I have discovered that one of the fundamental issues and time administration abilities and in addition self-inspiration. When I initially began I was eight hours every day, six days seven days will be ready to sit in an office and did not believe that. When I understood what I needed to do my long periods of covering isn't broken, so I compose my normal everyday employment. Sorted out and it was the opportune time, when I get a reaction arranged for questions that should be scholarly. This temporary position and time administration of the workplace for a long time, I needed to figure out how to spur myself through. Despite everything i'm searching for utilizing the organization thought of the different proposition and thoughts. Regardless i'm keeping my alternatives open to new openings, be that as it may, are proceeding to work for the University of Bangladesh on the planet. I'm getting a charge out of this profession. I keep on working hard for my position and plan to keep on learning about the business and meet new individuals will. It was a superb ordeal, and I trust the other understudy received a great deal in return.

## **6.2 Scope for Further Career**

Daffodil Software Ltd. is a custom programming administrations firm situated in Bangladesh with the Development and Support Office in Kuala Lumpur, Malaysia. We have broad involvement in numerous different zones of both programming improvement and equipment administration alongside frameworks reconciliation. Our accomplished staffs of experts have worked with a wide cluster of stages, dialects, and instruments over the span of our different ventures.

## **References**

[1] Get idea about Daffodil Software limited (DSL), Available at: <http://http://daffodilsoft.com//>.

## **Appendices**

### **Appendix A: Internship Reflection**

The primary goal of my internship in a professional setting, practical solutions to real-world problems is to apply the knowledge gained in the classroom. And professionally relevant competencies and relationships in a professional setting, learning to deal with new knowledge, skills, and the ability to determine how to sharpen and develop plans. Add to network with other professional's supervisors and professional relationships. To fulfill the duties of my internship, I'm exercising proper business etiquette. I am an organization's mission / vision is implemented, how to contact colleagues, how power is shared, how it is structured, how decisions are made, how to understand the culture of a professional organization, and what degree of accountability and feedback to the organization. With an assessment at the end of my internship supervisor and internship experience running through individual meetings provides an opportunity to take a professional opinion. Internship experiences to prepare for life in a global society, leadership and service, my gift to be able to put it to use.