AN INTERNSHIP ON NETWORK ENGINEERING

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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

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APPROVAL

This Internship titled "An Internship on Network Engineering at Jamuna Bank Limited", submitted by Mohiminul Islam 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 13 September 2022.

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ii

DECLARATION

We hereby declare that, this project has been done by us under the supervision of Ms. Israt Jahan, Lecturer, Department of CSE Daffodil International University. We 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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iii

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ABSTRACT

I'll be showcasing my accomplishments and the lessons I'm learning from my internship in this report. My primary focus during my internship as a networking engineer has been to advance my networking skills and knowledge of IP addressing, various types of cable and cabling equipment, monitoring, familiarity with router and network architecture, switch, server, and rack. Many network managers are engaged in new technology development. I want to learn about actual work while I'm an intern. I am very eager to begin working as a network engineer. Because of this, I decided to intern in "Computer Networking." Large reviews from my time at Jamuna Bank Limited were quite positive for my future careers. Dealing with the actual issues that an employee is experiencing has shifted to become another important consideration for benefit reviews.

TABLE OF CONTENTS

CONTENTS	PAGE
Board of examiners	ii
Declaration	iii
Acknowledgments	iv
Abstract	V
CHAPTER 1: INTRODUCTION	1-3
1.1 Introduction	1
1.2 Motivation	1
1.3 Internship Objective	1
1.4 Introduction to the company	2
1.5 Report Layout	2
CHAPTER 2: ORGANIZATION	
2.1 Introduction	3
2.2 Product and market situation	4
2.3 Target Group	4
2.4 SWOT Analysis	4-6
2.5 Organization Structure	6
CHAPTER 3: TASK, PROJECT AND ACTIVITIES	
3.1 Daily Task and Activities	7-17
3.2 Event and Activities	18
3.3 Projects task and Activities	19-31
3.4 Challenges	
CHAPTER 4: COMPETENCIES AND SMART PLAN	32
4.1 Competencies Earned	32
4.2 Smart Plan	32
CHAPTER 5: CONCLUSION AND FUTURE CARIEER	33-35
5.1 Discussion and Conclusion	33
5.2 Scope for Further Career	33

References	34
Appendices	35

LIST OF FIGURES

FIGURES	PAGE NO
Figure 2.5.1: Organization Structure	6
Figure 3.1.2: Email Checking	7
Figure 3.1:3 Dashboard Monitoring	8
Figure 3.1.4: Procurement Process	9
Figure 3.1.5.1: Straight cable Color Code	10
Figure 3.1.5.2: Cabling Toolkits	11
Figure 3.1.5.3: Cable Testing	12
Figure 3.1.6.1: Wireless Router Connection	12
Figure 3.1.6.2: Web Login Page	13
Figure 3.1.6.3: Quick Setup Page	13
Figure 3.1.6.4: Ethernet Selection	14
Figure 3.1.6.5: WAN Configurations	15
Figure 3.1.6.6: Wireless Configurations	15
Figure 3.1.6.7: Setup Summary	16
Figure 3.1.7: VoIP Phone	17
Figure 3.3.1: Familiar with VoIP Phone	19
Figure 3.3.2: VoIP Phone Port Management	19
Figure 3.3.3: Instruction about VoIP Phone connection	20
Figure 3.3.4: Auto provisioning	21
Figure 3.3.5: Admin Login	21
Figure 3.3.6: Login menu	22
Figure 3.3.7: IP Configurations	22
Figure 3.3.8: IPv4 Configurations	23
Figure 3.3.9: DHCP	23
Figure 3.3.10: IPv6 Selection page	24
Figure 3.3.11: IPv6 Configurations	24

Figure 3.3.12: IPv6 Configurations	25
Figure 3.3.13: Starting page	25
Figure 3.3.14: Login page	26
Figure 3.3.15: IP Configurations	26
Figure 3.3.16: IP Configurations	27
Figure 3.3.17: Add Domain	27
Figure 3.3.18: SIP global settings	28
Figure 3.3.19: SIP proxy	28
Figure 3.3.20: SIP port	29
Figure 3.3.21: Connection manual	30
Figure 3.3.22: Web login	31
Figure 3.3.23: SIP Configuration	31

LIST OF TABLES

TABLE	PAGE NO
Dashboard Indicator	9

CHAPTER 1 INTRODUCTION

1.1 Introduction

We are currently in an era of information technology. We can no longer think about the future without the internet. Globally, there are many users of internet innovation, and networking is a crucial component of that because all technology depends on it. Without the internet, we are completely helpless. Today, communication and networking are the primary foundations of any company, office, bank, and exchange. All ISP agencies must have a network in order to run their offices and conduct business. In this paper, I've identified a few areas that are crucial for networking.

1.2 Motivation

It turns out that all of these practical assignments are extremely beneficial and applicable to the students' everyday duties and activities, which promotes a stronger type of student motivation known as self-motivation. It has been demonstrated that teaching theory with practical components is a successful method of informing students. This is especially valid while using computer networking. The author has a number of practical projects that make use of cutting-edge computer technologies for teaching computer networking. It turns out that all of these practical assignments are extremely beneficial and applicable to the students' everyday duties and activities, which promotes a stronger type of student motivation known as self-motivation. the Internet I've emphasized a few areas in this study that are crucial for networking.

1.3 Internship Objective

As the Network Engineering Intern, I collaborate with our Branch manager, staff members, the network engineering team, and the MCNC NOC to create a strategy and put in place a timeline for redesigning and maintaining the rack structure at our remote sites. In order to accomplish this, I am front and center, hands-on, and actively giving my creative energy throughout the event. Throughout the program, I engage in important work and practical projects that will help me develop both professionally and personally.

The Outcome

- Learn office manner
- Gain the practical knowledge of what we have studied.
- Understand the fundamental concepts of networking values, internet protocols and technologies.
- Learn how to perform employee support.
- Procurement processing
- Learn about Ip Camera, VoIP phone setup and troubleshooting

1.4 Introduction to the company

Jamuna Bank Ltd is a third-generation private commercial bank founded by a group of local business owners. It was established on June 3, 2001 and registered under the Companies Act 1994.Alhaz Md. Nur Mohammed is the chairman of Jamuna bank. Currently It have 132 Branches 45 Sub branches And 200 atm booth around Bangladesh

1.5 Report Layout

In the first part of this document, I describe how I created my internship and discuss my motivation and goals. The second chapter of this article discusses the structure of my internship. It contains information on how my organization, product, and goal group function. My job, activities, objectives, and what I learnt from my internship are briefly discussed in the third chapter. Competencies and a wise plan are discussed in chapter four. Talk about the epiphany and my future existence in this place in the fifth chapter.

CHAPTER 2 ORGANIZATION

2.1 Introduction

Jamuna Bank Ltd is a third-generation private commercial bank founded by a group of local business owners. It was established on June 3, 2001 and registered under the Companies Act 1994. Alhaz Md. Nur Mohammed is the chairman of Jamuna bank. Currently It have

132 Branches

45 Sub branches

And 200 atm booth around Bangladesh

ICTD Division Role:

For a service industry like banking, the use of technology to provide prompt services to customers is unavoidable. They are adamant about incorporating information technology into their operations in order to provide prompt but accurate service to their customers. But Jamuna Bank Network Division Mainly focus on their employee group of their branches are linked to the internet. They've installed 200 ATMs. They have already introduced direct debit cards, limited-range credit cards, and tele banking. All of this, they believe, will "take your bank to new heights in auto-banking services."

Networking Division Role:

The organization's networking unit divides the job into different phases. They receive internet service from a service provider and are managed using various switches. These operations are set up in stages as follows. As needed, deploy the managed network to the office's numerous offices. These tasks include keeping an eye on the network, fixing it when it breaks, setting up a data center, and promptly sending and receiving information to the recipient.

2.2 Product and Market Situation

- ATM services
- Internet Banking Services
- Retail Banking
- Deposit taking including special schemes viz. MSS, MBS, DBDS, TBDS etc.
- Remittance and collection
- Import and Export handling and financing
- Corporate Banking
- Loan syndication
- Project Finance
- Investment Banking
- Consumer Credit
- Lease Finance
- Hire Purchase
- 24 Hours Banking Q-cash ATM
- Personal loan for women

2.3 Target Group

Jamuna Banks Target group all people with Govt Republic of Bangladesh Id card expect student.

Network Team target group all of the employee who or whom work in Jamuna Bank Limited

2.4 SWOT Analysis

SWOT analysis is a thorough examination of an organization's exposure and potential in terms of its strengths, weaknesses, opportunities, and threats. This enables the organization to maintain its current level of performance while also anticipating future opportunities to improve its performance in comparison to competitors. Although this tool can be used to study an organization's current position, it can also be used to make changes in the organization's strategic management.

Strengths:

- Experienced Senior management
- Satisfactory capital base
- Loan exposure with low infection rate
- High service levels
- IT/software expertise

Weakness:

- Limited market share
- Exposure to large loan
- Mixed quality staff
- Excessive dependency on term deposits
- Weak fund management
- High cost of fund
- Islamic Branch funds are not ring fenced

Opportunity:

- Regulatory environment favoring private sector
- Expand number of branches/sub-branches
- Credit card
- Small and medium enterprises

Threats:

- Daily basis interest on deposit offered by another private bank.
- Increased market competition for quality assets
- Supply shortage of foreign currency
- Overall liquidity crisis in the money market
- Security Threats
- Non-bank competition (financial or NGO company)

Technological Advancement

2.5 Organization Structure



Figure 2.5.1: Organization Structure of Jamuna Bank Limited

CHAPTER 3 TASK, PROJECT AND ACTIVITIES

3.1 Daily Task and Activities

Daily task mainly focuses on employee support. The Jamuna Bank Network division deal with employee about the complaint. Some example of complain given below with figure and explain the example.

3.1.2 Email Checking

Check email continuously to find employee support and problem. If employee face any problem then solve it as soon as possible (like as ping problem, no print in printer, etc.). If there are any problem with bandwidth then call to the ISP. If found security problem (login issue, wrong password, website access etc.) then inform it to immediate senior of Network Team.



Figure 3.1.2: Email Checking

3.1.3 ISP Dashboard Monitoring

		REPORTS +	SETTINGS +	2
ive Status - Branch ISP and F	C-Link		Contraction in the local division of the loc	*
RC Links				
		EDIT HELP	JBL Branch (DOWN)	
for RC Links				
LINK NAME	IP ADDRESS		for JBL Branch (DOWN) Ordered by ISP. According to a second	
No activit	y to report.		NODE NAME	
			IP ADDRESS	
			Paral Pride C. L. D. 1917	
BL Branch (UD)			Gazaria Sub-Branch ADNT 10.168.120.154	
De Branch (OP)			lamtoliBazar Sub-Br 4DNT 10.165.73.18	
			ISP BBTS	
or JBL Branch (UP)			Kaligani Sub-Br BRTS 10 170 222 14	
Ordered by:ISP - Ascending then by Node Nar	ne - Ascending		Kazirbat Br BBTS 10 127 11 10	
NODE NAME	IP ADDRESS		ISP BracNet	
PADNT			Kachpur BracNet 172 35 51 2	
Aldi_ADNT	10.168.124.74		ISP DhakaCom	
Badarganj Sub-Br ADNT	10.165.73.22		Gazaria Sub-Branch AmbertT 10.113.13.102	
BeaniBazar ADNT	10.168.124.30		Sherpur_AmberIT 10.113.13.26	
Bhaberchar ADNT	10.168.124.10		ISP_IOL	
Bhulta ADNT	10.168.124.102		Danga Bazar Sub-Br_IOL 10.100.6.182	
Chapai Nawabgani SME ADNT	10.168.124.42		Patuakhali_IOL 10.100.6.74	
Dumuria Br ADNT	10,165,73,6		ISP_Link3	
			Anumari CME Link2 10 79 1 79	

Figure 3.1.3: Monitoring ISP provided link up/down dashboard.

Jamuna Bank Limited's use Two different ISP provide bandwidth connection for connect every Branch, Sub-branch, Atm with bank data center. One use for primary node and one use for secondary node. When primary node gets down then secondary node support as primary node and primary node known as secondary node.

Symbol Detection

Symbol	Detecting the state
	Unavailable
•	Slow Bandwidth
	Link Up

Table: Dashboard Indicator

3.1.4 Procurement

Procurement is a vital stride in understanding supply chains, because it assists a company find authentic suppliers that can supply competitively priced commodities and services that befit the company's demand. That's the case whether the company is searching raw elements for manufacturing, a marketing services provider or new office supplies.

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Fi	le Home Insert Pag	je Layout Formulas Data Revie	aw View Help Q Tel	l me what you want to do			,⊊ Share
Past	K Cut Copy → Format Painter Clipboard □	$\begin{array}{c c} \bullet & g & \bullet & A^* & A^* \\ \bullet & g & \bullet & A^* & A^* \\ \bullet & g & \bullet & A^* & g & g & g & g & g \\ \hline \bullet & g & \bullet & A^* & g & g & g & g & g & g & g & g & g & $	eb Wrap Text Gene ∰ Merge & Center + \$ + nment 5	ral % 9 €.0.00 Number 5	Format as Cell Table × Styles × Styles Cells	∑ AutoSum × A ↓ Fill × ✓ Clear × Sort & Find & Filter × Select × Editing	^
B81	• : × 🗸	ƒx f) Deposit					*
1	A	В	С	D	E	F G H	
4		Number of Branches/Sub-branches/Divisi	Ready Fully Compliant	Ready and Comply			
5		Pending Transfer	Ready Fully Compliant	Ready and Comply			
6		Pending Resignation	Ready Fully Compliant	Ready and Comply			
7		Pending LFA	Ready With Customization	3 days required	Have to Customize and Ready the Product		
8		On Leave/On Roster/On Duty Today	Ready With Customization	3 days required	Have to Customize and Ready the Product		
9		Leave Pending for Approval	Ready Fully Compliant	Ready and Comply			
10		Human Capital Analysis (for a given date) -					
11		i. Desk Wise	Ready With Customization		Have to Customize and Ready the Product		
12		ii. Grade Wise	Ready With Customization		Have to Customize and Ready the Product		
13	Dash Board (Admin-HRIS):	iii. Zone Wise	Ready With Customization		Have to Customize and Ready the Product		
14		iv. Employment Type Wise	Ready With Customization		Have to Customize and Ready the Product		
15		v. Entry Type	Ready With Customization	5 Dave Required	Have to Customize and Ready the Product		
16		vi. Branch/Division	Ready With Customization	5 Days Nequileu	Have to Customize and Ready the Product	Activate Windows	Windows
4	Scope of Work	(+)			÷ [4]	ee to betangs to detivate	•••••••••••••••••••••••••••••••••••••••
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Figure 3.1.4: Review Vendor Given File

In Jamuna Bank I have some experience on procurement. That's time Jamuna bank publish their tender for Hardware and HRIS based software. My task was found the best vendor whom comply all of the bank requirements. If there found a large number of vendor list then call a meeting with vendors.

3.1.5 Cabling

Cabling is the core fundamental of Networking. The Jamuna Bank Limited use **Cat6** cable and **Fiber** cable for connect their all device with head branch. Mainly Cat6 use for ethernet connection and Fiber Optic for connect all ISP provided link to Bank Data Center. Bank use UTP Cat6 cable for cheap installation cost and good bandwidth speed. UTP cable easily survive business types office. Jamuna Bank network division cabling between two different devices like as Router-Switch, Switch-Pc, Switch-Printer, Switch-Hub. Straight through cable connect two different types of devices. My task was performed straight cabling.

Straight through cable color code:



Figure 3.1.5.1: Color Code

Require tools

- Network tester (for testing cables)
- ➢ Crimping pliers
- ➢ Wire stripping knife
- Stripping pliers' knife
- ➤ Knife
- Card knife
- Crystal Connectors





Figure 3.1.5.2: Cabling Toolkits

First cut wire with a wire striping knife, and then place all wire sequentially with a color code. Straighten it out using a wire striping pillar. Then carefully insert it into Crystal Connectors and barely into the RJ45 connector. Place the connector in the crimper and press firmly. Finally, test with a network tester.



Figure 3.1.5.3: Testing cable with Network tester

3.1.6 Wireless Router Setup

> At first turn on router and connect device with router provided password



Figure 3.1.6.1: Finding Router

Go to any bowser from device

> Type Router setup IP in search box, Login IP collect from Router box or body

- ➢ Hit enter or go button
- Login with username and password, notice that username and password collect from router body.

← → C ▲ Not secure http://192.168.1.1	zula 💿 Grapich Design 👘 Mohiminul Islam F 📀 👅 Linux for Ethica	아 순 ☆ 🌈 🖬 /? 🗰 🖬 🚧 👯
TP-LINK [®]	30	OMbps Wireless N ADSL2+ Modem Router Model No. TD-W8960N
	Note: The username or password is incorrect, please input again.	
	2 admin	
	Login	
	Copyright © 2014 TP-LINK Technologies Co., Ltd. All rights reserved.	Activate Windows Go to Settings to activate Windows.

Figure 3.1.6.2: Login Web Page

- > Enter router and go to quick setup.
- Press on next button

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TP-LINK	300Mbps Wireless N ADSL2+ Modem Router Model No. TD-W8960N	
Device Info Quick Setup Advanced Setup	Quick Setup - Start	
Wireless Guest Network This guide will help you set basic parameters for Internet connection. Please click NEXT to continue. Diagnostics For function or parameters in details, please click the corresponding menu on the left. Management For function or parameters in details, please click the corresponding menu on the left.		
Logout	Next	
192.168.1.1/qsstart.html	Activate Windows Go to Settings to activate Windows.	

Figure 3.1.6.3: Quick Setup page

- Press on Ethernet Wan
- ➢ Hit Next button

TP-LIN	K° 300Mbps Wireless N ADSL2+ Modem Router Model No. TD-W8960N
Device Info Quick Setup Advanced Setup	Quick Setup - WAN Configurations
wireless Guest Network	Please choose the Wan type for Internet access.
Diagnostics	Choose WAN Type: ADSL WAN For ADSL(Telephone line/RJ11) Service
Management Logout	Ethernet WAN For Ethernet(RJ45) Service
	Enable IPv6 for this service
	Skip WAN Next
	Skip WAN Next

Figure 3.1.6.4: Ethernet selection

- Select WAN Link Type: I Poe
- ➢ WAN IP Address Setting: Mark as Static
- ➢ WAN IP Address: [Collect from ISP]
- ➢ WAN Subnet Mask: [Collect from ISP]
- ➤ WAN gateway IP Address: [Collect from ISP]
- ▶ MTU: 1500 or Optional
- DNS Setting: Set Manually
- Primary DNS: [Collect from ISP]
- Secondary DNS: Optional or collect from ISP
- Press on Next

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TP-LINK	C.	300Mbps Wireless N ADSL2+ Modem Router Model No. TD-W8960N
Device Info Quick Setup Advanced Setup	Quick Setup - WAN Config	urations -
Wireless Guest Network Diagnostics	Ethernet WAN Port:	LAN4/WAN
Management	WAN Link Type:	IPoE(Dynamic or Static IP over Ethernet) 💙
Logoux	WAN IP Address Settings: WAN IP Address:	O Dynamic IP Static IP
	WAN Subnet Mask:	
	WAN gateway IP Address: MTU (bytes):	(optional)
	DNS Settings:	Obtain Automatically
	Primary DNS:	
	Secondary DNS:	(opuonar)
		Activate Windows Back Skip WAN Next Go to Settings to activate Windows.

Figure 3.1.6.5: WAN Configurations

- ➢ Mark Enable Wireless
- Set Wireless Network Name as wish
- > Network Authentication: Select WPA-Personal if Open for all Then Select Open.
- If select WPA-Personal then enter wireless Network Key as wish for security type strong like as @@##abcD@@
- Press Next

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TP-LINK			300Mbps V	Vireless N ADSL2+ Modem Router Model No. TD-W8960N
Device Info Quick Setup Advanced Setup Wireless	Quick Setup - Wireless Cor	nfigurations		
Guest Network Diagnostics Management	Enable Wireless:			
Logout	Wireless Network Name: In order to protect your network from hackers and un	Manager_rawa authorized users, it is highly recommended you	(Also called SSID) I choose one of the following wireless	ss network security settings.
	Network Authentication: Wireless Network Key:	WPA-Personal (better/recommended)	d WPA Pre-Shared Key) and 63 characters or 8 to 64 Hexad	fecimal characters.)
		Back Skip Wi-Fi	Next	
				Activate Windows Go to Settings to activate Windows.

Figure: 3.1.6.6: Wireless Configurations

- ➢ Review Setup
- Press Confirm

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TP-LINK	\$	300Mbps Wireless N ADSL2+ Modem Router Model No. TD-W8960N
Device Info Quick Setup Advanced Setup Wireless	Quick Setup - Summary	
Guest Network	WAN Configurations	
Management	WAN Type:	Ethernet WAN
Logout	Layer2 Information:	LAN4/WAN
Logout	WAN Link Type:	IPoE
	WAN IP Setting:	Dynamic IP
	DNS Setting:	Obtain Automatically
	Note1: Some WAN Connection(s) or Layer2 interface(s	s) may be replaced by new one!
	Note2: The Virtual Server Rules of some WAN Connect	tion(s) may be deleted!
	Wi-Fi Configurations	
	Wireless Network Name:	TP
	Network Authentication:	WPA-Personal
	Wireless NetWork Key:	122333000
		Activate Windows Cancel Back Confirm

Figure 3.1.6.7: Setup Summary

3.1.7 VoIP Phone Support

In Jamuna Bank, Every Branch connect with VoIP phone for easy connect with head office or another branch. Sometimes employee facing some problem with it like as acquiring service mood, login issue etc. and send email to head office. Our task was found out the problem and fixed it as soon as possible.



Figure 3.1.7: VoIP Phone

In Jamuna Bank, Every Branch connect with VoIP phone for easy connect with head office or another branch. Sometimes employee facing some problem with it like as acquiring service mood, login issue etc. and send email to head office. Our task was found out the problem and fixed it as soon as possible.

EVENT & ACTIVITIES

3.2 Data Center Migration

Jamuna Bank recently shift data center from Jamuna Bank old head office to new head office. I have some experienced on it about how to migrating data center and Network team responsibilities to migrating data centre .

- Data centre architecture.
- ➤ Manage all component.
- > Electric connection and isolation server rack.
- Connect all ISP provided link in fiber patch panel at meet me room.
- Connect ISP provided link from meet me room to Data center rack.
- Backup all data to another sever name as DRS (Data Recovery Center).
- Plugged out all wire from Router, Switch, Server etc. from old data center and shift it to new data center rack.
- Setup what transferred.
- ▶ Recover backup data from DRS.

Activities

- Arrange Employee meeting for opening ceremony of Jamuna Bank Foundation
- Hosted virtual meeting for Jamuna bank employee
- Arrange and attend meeting for Jamuna Bank's Software and hardware tender with selected vendors

PROJECT

3.3 AVAYA J139 VOIP PHONE SETUP AND INSTALATION EVERY BRANCH **Avaya VoIP Phone Implementation:**

Buttons/Keys

Front

- 1. Main menu-Displays the list of options, such as Features, Applications, Settings, Network information, Administration, and About.
- 2. (2,15) Navigation cluster-Used to navigate on the Phone screet
- · Up and Down arrow keys: to scroll up and down.
- · Right and Left arrow keys: to move cursor in the text input field, and to toggle values in the selection fields.
- OK button: to select the action assigned to the first soft key.
- 3. Contacts-Displays the entries in your Contacts list.
- 4. Voicemail—Used to dial the configured voice mail number to receive a voice message.
- 5. Recents—Displays call history list.
- 6. Headset Used to toggle your call from the speaker to headset.
- 7. Speaker-Used to turn on the speaker.
- 8. Handset-Used to receive and make calls.
- 9. Volume—Used to adjust volume of a handset, a speaker, or a ringtone.
- (+): To increase the volume.
- (-): To decrease the volume.

1. 5V DC Jack-To connect the power supply.

2. Network port—To connect the Ethernet cable.

10. Mute Button-Used to mute and unmute the outgoing audio.



- 11. Beacon LED-Provides alerts for incoming calls and
- 12. Phone display-Displays two areas
- Top Bar: It is always visible, displays communication and device status, and time and date. Application area displays the following:
- Application header: It displays the context specific application title, and one or more subtitles. Depending on the appearance type and the call
- state, the header displays details of the call. - Application content area: it displays menus, lists, pop-up windows, images, or other application content.
- Softkey labels area: it displays labels with information about the state of the Soft Key buttons.
- 13. Line Keys-Used to select the corresponding rows. Each line key has a LED that displays the following visual alerts: Red light: disabled features.
- Green light: incoming call and enabled features.
- · Red and green light: phone is off-hook
- 14. Softkeys—Used to select the corresponding label of context-specific actions.
- 15. (2,15)-see below
- 16. Phone key-Displays the Phone screen.

Figure 3.3.1: Familiar with VoIP Phone



Figure 3.3.2: VoIP Phone Port management

- 3. PC port—To connect the computer. Note: PC port is disabled when a Wi-Fi network is used
- 4. Headset Jack-To connect the headset.
- 5. Handset Jack To connect the handset.

To connect the Avaya J139 IP Phone to the

Back

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Instructions

Avaya Cloud Office, you must first connect the device to the network and power it up. 3. Once the device is boots up, it will obtain an IP address from your network.

1



- If your router has PoE port available, connect the J139 ethernet port to your router. The power adapter is not required in this case. The device bootup will start. 4. Once connected to the network, the device will automatically connect to ACO, and login.
 - 5. The device may reboot if there is new software that needs to be installed. The latest software for ACO must always be installed on the device in order for it to connect to ACO and provide service.
 - Once the device has network connectivity, allow any upgrades to be completed successfully before attempting to use the phone.

If your router does not have PoE port available, connect the J139 ethernet port to the available port on your router. Connect the power adapter to the J139. 2. The device bootup will start.



Figure 3.3.3: Instruction about VoIP Phone connection

After connect with electricity or PoE port wait until starting the phone. Start to start the phone, there will be the following interface prompt, select no, and continue to wait for the phone to complete the startup.



Figure 3.3.4: Auto Provisioning

When the phone is started, we can see the following SIP (proxy list empty, enter file server address) interface, select Cancel, go to the next step, and click OK. Continue to click More, then click Admin.

- 12:2	25am			
Startin	9			
Wa	iting for DH	ICP.	2	
		Ava	ya	
Admi	n)			
Admi				

Figure 3.3.5: Start page

Enter the log in password 23278 (Default)

	ANAN/A
	12:33am 02/10
	Administration
	Avaya
_	Enter 123 More

Figure 3.3.6: Login Menu

Click Enter, and then select IP Configuration to view the IP address obtained by the phone

12:34am 02/10			
Administration	1		
IP Configu	ration	2	> -
Debug	AV	aya	- -
Select		Ba	ck

Figure 3.3.7: IP Configuration

Select Ethernet IPv4

Administration	> IP Configu	ration	
Ethernet IP	v4	2	>
Ethernet IP		aya	
Select		Bac	k

Figure 3.3.8: IPv4 Configuration

- Toggle Use DHCP
- ➢ Input Phone to ***. **.**.

12:35am 02/10	
IP Configuration > Ethernet IPv4	
Use DHCP	
Phone Avaya 0.0.0	
Save Toggle Cancel	

Figure 3.3.9: Disable DHCP

Select Ethernet IPv6

12:35am 02/10			
dministratior	n > IP Config	guration	
Ethernet If	PV4		>
Ethernet If	2V6 A	vaya	
Select)	В	ack

Figure 3.3.10: IPv6 selection page

Toggle Use DHCP for IPv6

12:36am 02/10			
Configuratio	n > Etherne	et IPv6	
Use DHCP(V6)	\frown	
Use SLAAC		vaya	-
То	ggle		Back

Figure 3.3.11: IPv6 Configuration

➢ Toggle Use SLAAC

12:36am 02/10
IP Configuration > Ethernet IPv6
Use DHCP(V6)
Use SLAAC Avaya
Save Toggle Cancel

Figure 3.3.12: IPv6 configuration

After Toggle DHCP and SLAAC phone need auto restart

After start press Admin button

C	
	12:40am 02/10
	Starting
- 00	Waiting for DHCP.
	Avaya
	Admin
L	

Figure 3.3.13: Starting page

click Admin, enter the login password 27238 (default)

	12:52am		
	Username		
9	Passwe		
		More	

Figure 3.3.14: Login page

- ➢ Select IPv4
- ➤ Assign Phone IP as 172. **. Branch Code. **



Figure 3.3.15: IP configuration

- ▶ Input Gateway 172. **. Broadcast Address. 254
- Subnet Mask As 255.255.255.0
- Press Save button

12:56am 02/10		
IP Configuration	n > Ethernet IPv4	
Gateway	172. 254	
Mask	255.255.255.	0
Save Bac	kspac	1

Figure 3.3.16: IP configuration

- ➢ Go to SIP global setting
- > Type SIP domain as jamunabank.com.bd
- Set Avaya Environment to Disabled
- ➢ Set IP Office Environment to CCMS

57		
	AVAYA	
	SIP > SIP global antiinga SIP domain example com	
	abc Back	

Figure 3.3.17: Add domain

Change SIP proxy policy to Manual

AVAYA	
 12:02am Outain SIP > SIP global sertings Failback policy	
 SIP proxy policy Manual + Save Change Cancel	

Figure 3.3.18: SIP global settings

- Set SIP proxy to Avaya provided IP
- Change Protocol to TCP



Figure 3.3.19: SIP proxy

➢ Input SIP port 5060

- Press Save button and phone need an auto restart
- ➢ After auto restart phone id ready to use

0	Αναγα
	12:03am od/3a SIP > Add SiP preay Protocol TCP + SIP port UM+65535 Back

Figure 3.3.20: SIP Port

After configuring the device with each individual branch code, the devices were send to the respective branches. When branches receive the devices, they inform the head office about receiving the product. Then we send an email to respective branch's Operation Manager about IP Phone set connection manual.

IAMUNABANK

Information and Communication Technology Division

IP Phone set connection manual





After setup according to IP Phone set connection manual

Enter the IP address that just checked in the browser, and enter the account number: admin and password: 27238 (default) according to the prompts. We need to change the password when log in for the first time. The length of the password is 8-31 digits. After the modification is completed, will be asked to enter Re-login to the web page with the new password.

Username	admin	
Password		

Figure 3.3.22: Web Login

After enter AVAYA using VoIP web interface. Click the SIP option

- Set SIP User ID to Manager Rawa.
- ➢ Authentication User ID 20***(Branch Code).
- ➤ Authentication Password to 09999***.
- Save and Logout from web interface.

AVAYA ,	139 IP Phone		Logout
Status	SIP Account		Parameter Help
Network	Registration Status	Not Registered	Name : Authentication Password
Ethernet	SIP User ID	021	Password to log in to the phone
Wi-Fi	Authentication User ID	e1loe10	Tune String
SID	Authentication Password		Range : 31 characters(Blank, ASCII). The 'SIP Domain'
		Login	and 'SIP Proxy server' must be configured to enable this field for configuration.
Settings			Default : Empty("")
Date & Time	Busy Lamp Field (BLF)		
Management	BLF List URI		
Password	SIP Global Settings		
Debugging	SIP Domain	58voip.3cx.cn	
Depugging	Enable PPM as source of Proxy	Yes (Default)	
Certificates	Server		
Environmont Sottings	Proxy Policy	Manual (Use Phone Admi 🔻 🍟	
Environment Settings	SIP Proxy Server	58voip.3cx.cn:5060:transport	
Background and Screen Saver	Register to Proxy Server	Simultaneous (Default)	

Figure 3.3.23: SIP Configuration

CHAPTER 4 COMPETENCIES AND SMART PLAN

4.1 Competencies Earned

The employment market currently offers opportunity to pick up new skills. I learned a lot during this internship about topics relating to my field of study and gained a variety of skills that will help me in my future profession. I gained knowledge of business office etiquette through my internship. Through my internship, I learned how to remain calm under pressure. I have learned about every networking device and its components during this internship. Learn how to configure some networking equipment and provide customer help. Additionally, I now know more about VoIP's characteristics.

4.2 Smart Plan

I am aware of the fundamental ideas covered in this course. It will assist me in building a solid career. As I learn more about networking, the knowledge I am now gaining will be very beneficial. The fact that networking is in such high demand worldwide, especially in Bangladesh, is why I decided to pursue it. I have ambitions in this area that will enable me to advance to the positions of network engineer and network security engineer. Therefore, I must proceed.

4.3 Reflections

I've gained a lot of understanding about my skill set and confidence as a result of my internship. It has helped me to focus on my career objectives and will surely help me as I make decisions about my professional future. Additionally, I picked up technical knowledge concerning digitization and the overall energy sector. When I concluded my internship, I had a far larger collection of tools than when I started. My newly acquired information will get me ready for life following graduation. I am interested to see what the future holds because my experience has helped me move closer to my goals.

CHAPTER 5 CONCLUSION AND FUTURE CARRIER

5.1 Discussion and Conclusion

The path leading to the position I want to be in after graduation is beginning with an internship. Because it helps me prepare for the business life I want to have, internships are a practice I need to engage in. After going through the whole period of internship as an intern I've observed so many professional activities and learnt as well. This internship was very fruitful to me because I had to cover many different fields. I also learnt new concepts and new ways of working

5.2 Scope for Further Career

There are many different career options within the category of computer networking. Following a course in computer networking, one can choose to work as a network engineer, network architect, network or computer security specialist, or network and computer systems administrator. System that connects computers worldwide and enables resource sharing is known as a computer network. Computer networking can be used to connect devices at home, at work, and even between two devices that are spread out across different places. The best example is the internet since it enables secure data transmission between countless machines. Major organizations are continuously looking for IT network administrators. Technology is developing quickly, thus if a candidate is interested in entering this field, he should do it without delay.

REFFERENCE

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[4] Learn about Jamuna Bank, available at <<<u>https://en.wikipedia.org/wiki/Jamuna_Bank</u>>>, last accessed on 19/08/2022 at 11PM.

Appendices Appendix A: Internship Reflection Appendix B: Company Detail

In accordance with the Companies Act of 1994, Jamuna Bank Limited is a commercial bank in Bangladesh. It was founded on June 3rd, 2001. By March 2019, Jamuna Bank had 132 locations. Plot#14, Bir Uttam A.K Khandaker Road, Block#C, Gulshan-1, Dhaka, Bangladesh is where the company's headquarters are situated. A group of regional businessmen founded Jamuna Bank Ltd., a third-generation private commercial bank. The bank offers Islamic banking through designated branches in addition to regular banking. To provide online banking, the Bank operates a network of real-time online banking branches in both urban and rural locations.

In 2020, Jamuna Bank became a fully functional Shariah-based Islami bank..

JAMUN	ABANK
Туре	Public Limited Company
Traded as	DSE: JAMUNABANK
Industry	Banking
Founded	2001; 21 years ago in <u>Dhaka</u> , Bangladesh
Headquarters	<u>Dhaka</u> , Bangladesh
Key people	Mr. Alhaz Nur Mohammad (<u>Chairman</u>) ^[1] Mirza Ilias Uddin Ahmed (<u>MD</u>) ^[2]
Website	www.jamunabankbd.com

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