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NAVEEN P PANDURANGI

[1VK15CS034]

DECLARATION

I, **NAVEEN P PANDURANGI** B.E Student of 7th Semester for the academic year 2017-18 in Vivekananda Institute of Technology, Bengaluru, bearing the USN : **1VK15CS034** solemnly declare that the dissertation entitled "**CCNA Routing and Switching**" done at **Karnataka German Technical Training Institute (KGTTI), Bengaluru** under the guidance and supervision of External Guide **Mr**. **Mohammed Amir, Junior Engineer**, Department of Information Technology, KGTTI, Bengaluru & Internal Guide **Mrs. Chandramma R, Associate Professor and HOD**, Department of Computer Science Engineering, Vivekananda Institute of Technology, Bengaluru, in partial fulfilment for the award of Bachelor of Engineering in Computer Science and Engineering affiliated to Visvesvaraya Technology University, Belagavi, Karnataka.

I also declare that this report has not been submitted to any other university or institute for the examination of any degree before, to the best of my knowledge.

Place: Bengaluru **NAVEEN P PANDURANGI**

Date: **[1VK15CS034]**

EXECUTIVE SUMMARY

Internship program is an industry standard approach to learn, practice and work in a fast growing technology domain. During this internship training, real-time exposure towards the IT industry operations have been given. In this internship training, a learning map approach is adopted for building network development. In the period of 8 weeks, intern should be able to build a network topology by themselves with more confidence and positive attitude. Organization also has a goal of improving personal skills like time management, stress handling, self-confidence with technical skills. Technically at the end of 8 weeks of internship term interns should have a good knowledge about the concepts in CCNA Routing and Switching which are used for building the network by which packets have been successfully delivered.

The overall theme of this training is to provide a real-time examples of how exactly the packets are sent through the networking layers and are delivered safety without any loss of data. The security terms are very much essential in order to deliver the packets so, by considering perspectives and routing techniques the design and implementation of routers are explained in the tanning sessions. By giving the ongoing scenarios what we face in the world are briefly explained and also how to crack them are thought to the interns. Some of basic thing like setting up the router, configuring the switches and connecting them to different to systems are shown with live demonstration to know how exactly they function.

This report concludes with my overall impression of my work experience as well as my opinion of the Industrial Internship Program in general.

ABSTRACT

The Cisco CCNA Routing and Switching curriculum is designed for Cisco Networking Academy course participants who are seeking entry-level jobs in the Information Communications Technology (ICT) industry or wish to keep pace with fast paced implementation of ICT in their industry. CCNA Routing and Switching provides an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience and career skills development.

As from the last five years, in the successfully integration of the CISCO CCNA 1 and 2 courses with the Computer Networks (CN) course, whose goal is to introduce the students with the basic concepts of computer networking, main components of network architecture and how data is transferred across the network. Computer science students have basic computer skills, which increase their achievement in the CCNA program. Therefore, we used the Cisco's CCNA Exploration program, which is intended for advanced problem solving issues of computer networking (typically for degree programs in computer engineering or computer science), instead of Discovery, which is primarily intended for entry-level career oriented IT-skills students. However, today's elastic and scalable distributed computing environments should survive unpredictable peak demands, which requires not only to show their programming skills, but to understand how the lower protocols on network layer work.

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LIST OF ABBREVATIONS

ACRONYMS	ABBREVATIONS
OSI	Open Systems Interconnection
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
HTTP	Hyper Text Transfer Protocol
FTP	File Transfer Protocol
TFTP	Trivial File Transfer Protocol
IMAP	Internet Mail Access Protocol
DHCP	Dynamic Host Configuration Protocols
DNS	Domain Naming System
RIP	Routing Information Protocol
SSH	Secure Shell
RSA	Rivest, Shamir and Adelman
IGRP	Interior Gateway Routing Protocols
EIGRP	Enhanced Interior Gateway Routing Protocol
OSPF	Open Shortest path first
IGP	Interior Gateway Protocols
EGP	Exterior Gateway Protocols
BGP	Border Gateway Protocols
ISP	Internet Service Providers