SOFTWARE REQUIREMENT SPECIFICATION

Network Manager

A PROJECT REPORT

Submitted by

Vajid Kagdi (120280107011)

Shail Jhaveri (120280107031)

Parth Patel (120280107032)

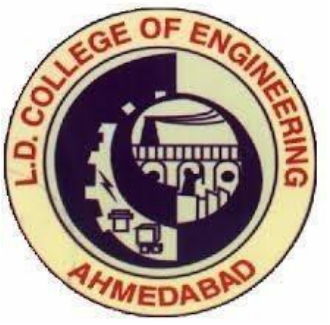
Shrey Bhatt (120280107033)

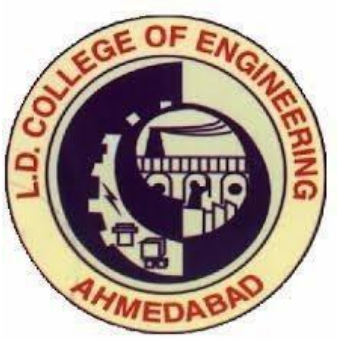
UNDER THE GUIDANCE OF

PROF. Tushar Champaneria

COMPUTER ENGINEERING DEPARTMENT

L.D. COLLEGE OF ENGINEERING, AHMEDABAD





CERTIFICATE

This is to certify that the academic project entitled **"NETWORK MANAGER"** accomplished by ***VAJID M KAGDI(120280107011)*** towards the partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Engineering at L.D. College of Engineering, Ahmedabad has been carried out under my supervision and guidance and is satisfactory.

Date:

Place: Ahmedabad

Prof. Tushar Champaneria

Assistant Professor

Computer Engineering Department

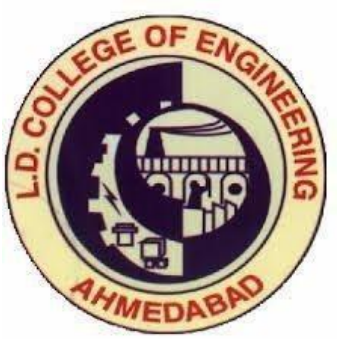
L.D. College of Engineering

Prof. D.A. Parikh

Professor and Head

Computer Engineering Department

L.D. College of Engineering



CERTIFICATE

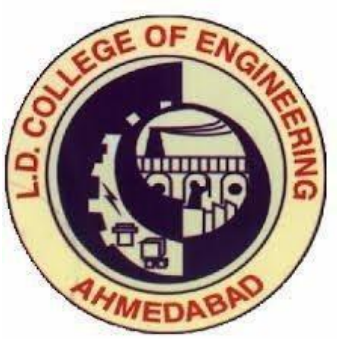
This is to certify that the academic project entitled **"NETWORK MANAGER"** accomplished by ***SHAIL R JHAVERI(120280107031)*** towards the partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Engineering at L.D. College of Engineering, Ahmedabad has been carried out under my supervision and guidance and is satisfactory.

Date:

Place: Ahmedabad

Prof. Tushar Champaneria
Assistant Professor
Computer Engineering Department
L.D. College of Engineering

Prof. D.A. Parikh
Professor and Head
Computer Engineering Department
L.D. College of Engineering



CERTIFICATE

This is to certify that the academic project entitled **"NETWORK MANAGER"** accomplished by ***PARTH A PATEL(120280107032)*** towards the partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Engineering at L.D. College of Engineering, Ahmedabad has been carried out under my supervision and guidance and is satisfactory.

Date:

Place: Ahmedabad

Prof. Tushar Champaneria

Assistant Professor

Computer Engineering Department

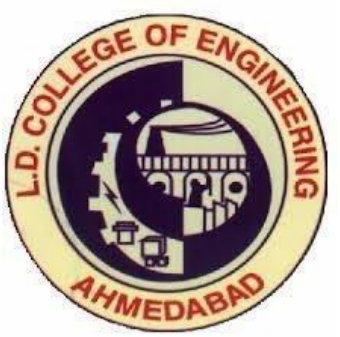
L.D. College of Engineering

Prof. D.A. Parikh

Professor and Head

Computer Engineering Department

L.D. College of Engineering



CERTIFICATE

This is to certify that the academic project entitled **"NETWORK MANAGER"** accomplished by ***SHREY K BHATT(120280107033)*** towards the partial fulfillment of the requirements for the degree of Bachelor of Engineering in Computer Engineering at L.D. College of Engineering, Ahmedabad has been carried out under my supervision and guidance and is satisfactory.

Date:

Place: Ahmedabad

Prof. Tushar Champaneria
Assistant Professor
Computer Engineering Department
L.D. College of Engineering

Prof. D.A. Parikh
Professor and Head
Computer Engineering Department
L.D. College of Engineering

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 19 December 2015 (18:05)

This is to certify that, ***Kagdi Vajid Mohamedrafik*** *(Enrolment Number-120280107011)* working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Design Engineering Canvas (DEC)	**Completed**
Patent Search and Analysis Report (PSAR)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student: Kagdi Vajid Mohamedrafik

Name of Guide : Mr. Tushar Ashokbhai Champaner

Signature of Student :

*Signature of Guide:

Disclaimer :

This is a computer generated copy and does not indicate that your data has been evaluated. This is the receip t that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 21 December 2015 (20:22)

This is to certify that, ***Jhaveri Shail Rajivbhai*** *(Enrolment Number-120280107031)* working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Design Engineering Canvas (DEC)	**Completed**
Patent Search and Analysis Report (PSAR)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student: Jhaveri Shail Rajivbhai

Name of Guide : Mr. Tushar Ashokbhai Champaner

Signature of Student :

*Signature of Guide:

Disclaimer :

This is a computer generated copy and does not indicate that your data has been evaluated. This is the receip t that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 23 December 2015 (12:12)

This is to certify that, ***Patel Parth Ashokbhai*** *(Enrolment Number-120280107032)* working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Design Engineering Canvas (DEC)	**Completed**
Patent Search and Analysis Report (PSAR)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student: Patel Parth Ashokbhai

Name of Guide : Mr. Tushar Ashokbhai Champaner

Signature of Student :

*Signature of Guide:

Disclaimer :

This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 20 December 2015 (2:33)

This is to certify that, ***Bhatt Shrey Keyur*** *(Enrolment Number-120280107033)* working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Design Engineering Canvas (DEC)	**Completed**
Patent Search and Analysis Report (PSAR)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student : Bhatt Shrey Keyur

Nameof Guide :Mr. Tushar Ashokbhai Champaneria

Signature of Student :

*Signature of Guide :

Disclaimer :

This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VIII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 12 April 2016 (20:03:56)

This is to certify that, ***Kagdi Vajid Mohamedrafik*** (Enrolment Number - 120280107011) working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Business Model Canvas (Image)	**Completed**
Business Model Canvas (Report)	**Completed**
Patent Drafting Exercise (PDE)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student : Kagdi Vajid Mohamedrafik

Name of Guide : Mr. Tushar Ashokbhai Champaneria

Signature of Student : _____

*Signature of Guide : _____

Disclaimer :
This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VIII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 12 April 2016 (19:57:42)

This is to certify that, ***Jhaveri Shail Rajivbhai*** (Enrolment Number - 120280107031) working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Business Model Canvas (Image)	**Completed**
Business Model Canvas (Report)	**Completed**
Patent Drafting Exercise (PDE)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student : Jhaveri Shail Rajivbhai

Name of Guide : Mr. Tushar Ashokbhai Champaneria

Signature of Student : _____

*Signature of Guide : _____

Disclaimer :
This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VIII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 12 April 2016 (19:48:57)

This is to certify that, ***Patel Parth Ashokbhai*** (Enrolment Number - 120280107032) working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Business Model Canvas (Image)	**Completed**
Business Model Canvas (Report)	**Completed**
Patent Drafting Exercise (PDE)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student : Patel Parth Ashokbhai

Name of Guide : Mr. Tushar Ashokbhai Champaneria

Signature of Student : _____

*Signature of Guide : _____

Disclaimer :
This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

GUJARAT TECHNOLOGICAL UNIVERSITY

CERTIFICATE FOR COMPLETION OF ALL ACTIVITIES AT ONLINE PROJECT PORTAL

B.E. SEMESTER VIII, ACADEMIC YEAR 2015-2016

Date of certificate generation : 12 April 2016 (17:26:09)

This is to certify that, ***Bhatt Shrey Keyur*** (Enrolment Number - 120280107033) working on project entitled with ***Network Manager*** from ***Computer Engineering*** department of ***L. D. College Of Engineering, Ahmedabad*** had submitted following details at online project portal.

Periodic Progress Reports (PPR)	**Completed**
Business Model Canvas (Image)	**Completed**
Business Model Canvas (Report)	**Completed**
Patent Drafting Exercise (PDE)	**Completed**
Final Plagiarism Report	**Completed**
Final Project Report	**Completed**

Name of Student : Bhatt Shrey Keyur

Name of Guide : Mr. Tushar Ashokbhai Champaneria

Signature of Student : _____

*Signature of Guide : _____

Disclaimer :
This is a computer generated copy and does not indicate that your data has been evaluated. This is the receipt that GTU has received a copy of the data that you have uploaded and submitted as your project work.

*Guide has to sign the certificate, Only if all above activities has been Completed.

CANDIDATES' DECLARATION

We, ***VAJID M KAGDI(120280107011), SHAIL R JHAVERI(120280107031), PARTH A PATEL(120280107032), SHREY K BHATT(120280107033)*** enrolled at L.D. College of Engineering Ahmedabad hereby declare the following:

We have defined our projects based on the basic requirements of our academic institutions. Each of us will make significant efforts to make attempt to solve the challenges. We have and will carry out the project work at our college under direct and consistent monitoring of **Professor Tushar Champaneria.** We have and will adopt ethical practices to share credits among all the contributors on their contributions during the project work. We will work on the project work under direct and consistent monitoring of our faculty guide.
We declare that:

- We have not and will not buy solutions developed by any third party and the efforts are made by us under the guidance ofguides.
- The project work is not copied from any previously done projectdirectly.
- The project work submitted by us is prepared by us and we fully understand the contents. We will make the best efforts to solve the problem given by the user.

VAJID M KAGDI
(120280107011)

SHAIL R JHAVERI
(120280107031)

PARTH A PATEL
(120280107032)

SHREY K BHATT
(120280107033)

PLAGIARISM REPORT

www. plagiarism -detect .com

Date: 5.4.2016

Words: 6770

Plagiarised sources: 26

Plagiarised: 1%

http://opus.govst.edu/cgi/viewcontent.cgi?article=1155&context=capst ones plagiarised from source: >1%

1. new system is more difficult and requires creative thinking and understanding
2. existing running system is also difficult, improper understanding of present system
3. likely to occur, these types of errors can be discovered

http://www.slideshare.net/SudharsanReddyKota/spatial-approximate-string-search-40399179 plagiarised from source: >1%

1. new system is more difficult and requires creative thinking and understanding
2. existing running system is also difficult, improper understanding of present system

http://www.slideshare.net/saicharan02/restricted-routing-infrastructures plagiarised from source: >1%

1. new system is more difficult and requires creative thinking and understanding
2. existing running system is also difficult, improper understanding of present system

http://www.slideshare.net/airbender4/cake-shop-billing-system plagiarised from source: >1%

1. new system is more difficult and requires creative thinking and understanding
2. existing running system is also difficult, improper understanding of present system

http://www.slideshare.net/MohdFaiyazAli/documentation-bvs plagiarised from source: >1%

1. new system is more difficult and requires creative thinking and understanding
2. existing running system is also difficult, improper understanding of present system

http://www.slideshare.net/anandhan30/college-management plagiarised from source: >1%

1. the data is handled.Error Detection:Even though every effort is make to
2. the occurrence of errors, still a small proportion of errors is

http://www.slideshare.net/vikasraj225/complete-web-vulnerability-scanner-project-report plagiarised from source: >1%

1. the data is handled.Error Detection:Even though every effort is make to
2. the occurrence of errors, still a small proportion of errors is

http://www.slideshare.net/hlksd/sample-projectdocumentation

plagiarised from source: >1%

1. the occurrence of errors, still a small proportion of errors is
2. likely to occur, these types of errors can be discovered

http://www.slideshare.net/joshaloneprince/steganography-45455495
plagiarised from source: >1%

1. the occurrence of errors, still a small proportion of errors is
1. likely to occur, these types of errors can be discovered

http://www.slideshare.net/amit_gandhi/job-portal-35796566
plagiarised from source: >1%

1. existing running system is also difficult, improper understanding of present system

http://www.emeraldinsight.com/doi/pdf/10.1108/13552540110365126
plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://www.slideshare.net/VASAVSHETHNA/miniproject1-report plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://onlinelibrary.wiley.com/doi/10.1002/iroh.19760610210/abstract
plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://dspace.thapar.edu:8080/dspace/bitstream/10266/3834/1/baljinder+thesis.pdf
plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://www.slideshare.net/snagendrakumar/project-scheduler-doc
plagiarised from source: >1%

1. existing running system is also difficult, improper understanding of present system

http://pnrsolution.org/Datacenter/Vol3/Issue3/135.pdf
plagiarised from source: >1%

1. existing running system is also difficult, improper understanding of present system

http://www.academia.edu/4619649/GTUAPP_-_PAGES
plagiarised from source: >1%

1. true, it can not only run the whole effort and

https://www.cs.cornell.edu/boom/2003sp/ProjectArch/PCATTCPC/about1.html plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://www.slideshare.net/malamishra/impro-2857158

plagiarised from source: >1%

1. the data is handled.Error Detection:Even though every effort is make to

http://www.academia.edu/17353861/Screw_jack_Designing_project_report plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://www.slideshare.net/rajuinsan/industrial-man-power
plagiarised from source: >1%

1. the occurrence of errors, still a small proportion of errors is

http://www.physics.iitm.ac.in/~sriram/professional/mentoring/p-reports/simran.pdf
plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://www.emeraldinsight.com/doi/abs/10.1108/13552540210413293
plagiarised from source: >1%

1. towards the partial fulfillment of the requirements

http://opus.govst.edu/cgi/viewcontent.cgi?article=1143&context=capstones plagiarised from source: >1%

1. likely to occur, these types of errors can be discovered

http://opus.govst.edu/cgi/viewcontent.cgi?article=1102&context=capstones plagiarised from source: >1%

1. likely to occur, these types of errors can be discovered

http://www.slideshare.net/pragnyadash98/online-shopping-report-42251732 plagiarised from source: >1%

1. likely to occur, these types of errors can be discovered

Table of Contents

1. ACKNOWLEDGEMENT

We take this opportunity to express our sincere gratitude to all those concerned with our project for their motivation and invaluable support. Without their support we cannot imagine a single step being progressed towards the success.

We are very thankful to our internal guide ***Professor Tushar Champaneria*** for his guidance, advice and encouragement. His constant supports on our efforts were the source of inspiration to carry out our study. We thank him for sharing his knowledge, valuable suggestions and moral support.

We are also thankful to our respected faculty members and Head of the Department ***Professor D.A. Parikh*** for their continuous support.

Along with our guides, we would like to express our gratitude to all our friends, colleagues and family members specially our parents for their affection, care, moral support and constant encouragement.

Last but not the least we would like to thank the Almighty God for his invaluable help and peerless support.

-VAJID M KAGDI

-SHAIL R JHAVERI

-PARTH A PATEL

-SHREY K BHATT

2. ABSTRACT

Network Manager is an android based app to discover, monitor, analyze and configure networks from anywhere. By using this app you can find out which devices are connected to your Wi-Fi network, in just a few seconds. Fast and accurate. This is a professional App for network analysis. A simple and intuitive interface also helps you evaluate the system performance. By installing Network Manager, we can also perform network related operations on remote networks.

The app includes the most common network tools that you can find in Windows or Linux. They will help you fix the problem in within few minutes or optimize network. Must have for IT professionals and network administrators.

Network Manager has a simple interface, so you in a few seconds will receive full information about your network connection, you will find internal and external IP address, broadcast address, gateway, network mask of the provider and other basic information.

Network Manager app provides access to the most popular network tools that network administrators and users often use on their computers.

3. List of Figures

4. List of Tables

5. PROJECT DETAILS

Definition

"Network Manager is an android application to manage and monitor connected devices to a network".

Basic Objective

- ✓ Network : Discovers all devices connected to a Wi-Fi network
  - Displays IP address, MAC address
  - Checks the availability of Internet connection
- ✓ IP Calculator : Shows you the subnet host address range, the subnet ID, and the subnet broadcast address for given input IP address with CIDR notation. The binary representation and hexadecimal representations of IP addresses are supported.
- ✓ Device manager : Enter your own names for each device
- ✓ Sharing : Share information via Twitter, Facebook, Message and E-mail
- ✓ Port Scanner: Find hundreds of open ports in a few seconds
  - Launch Apps for specific ports, such as Browser, SSH, FTP
- ✓ Network Performance : Understand your network performances by packet loss percentage, TTL, delay time using Ping and Traceroute
- ✓ System Properties : Enlists the system properties of localhost.
- ✓ System performance : Displays memory and CPU utilization, representation using graph is also supported.
- ✓ Misc Services:-
  - DNS lookup

Working Principle

The mobile application will be developed on the Android Platform. It will be developed on Native Android Platform using Android SDKs and with XML and Java Language. The application is based on client - server architecture, where the mobile application will act as a client and the server functionality will be provided by the requested server.

6.INTRODUCTION

Overall Description

Our project provides various functionalities and all the functionalities can be used for the following purposes.

1.) **Network Discovery**

Network discovery software is a type of network software that enables users and network administrators to find network devices and/or nodes over a computer network.

It automates the process of network discovery and gathers network infrastructure data on a local network.

Network discovery software is also known as network detection software.

Network discovery software is typically used in Wi-Fi networks to enable a Wi-Fi-enabled device to search for an access point (AP) to connect to. Such software either actively scans for an access point or passively listens for network SSID or data.

Network discovery software for businesses, besides helping in finding an active AP, also:

- Searches for all devices on the network
- Creates a visual network map/architecture/infrastructure
- Gathers and creates network and hardware inventory
- Provides network data for network management, monitoring or audit need

Some of the protocols and services used by such software to discover network nodes and gather data include TCP/IP, NetBIOS, SNMP and DNS.

2.) IP Calculator

IP Address Calculator is an easy-to-use IP subnet calculator that lets you to calculate every aspect of your subnet configuration in a few mouse clicks! The calculator generates a breaking down the network, subnet, and host portion. It shows you the subnet host address range, the subnet ID, and the subnet broadcast address. The binary representation and hexadecimal representations of IP addresses are supported.

Use this calculator if you have a list of IP addresses that you wanted to sort, remove duplicates, and ensure that another set of IP's is excluded.

Enter multiple IP-ranges or individual IP adresses to include/exclude and the calculator will evaluate the shortest possible representation of these IP addresses as network blocks. Or you let it

generate a list of IP addresses to feed nmap or your tool of choice.

3.) Ping

Ping is a computer network administration application utility used to test the reachability of a host on an Internet Protocol (IP) network and to measure the round-trip time for messages sent from the originating host to a destination computer and back.

Ping operates by sending Internet Control Message Protocol (ICMP) echo request packets to the target host and waiting for an ICMP echo reply. It measures the round-trip time from transmission to reception, reporting errors and packet loss. The results of the test usually include a statistical summary of the response packets received, including the minimum, maximum, the mean round-trip times, and usually standard deviation of the mean.

Options may include the size of the payload, count of tests, limits for the number of hops (TTL) that probes traverse, and interval between the requests.

4.) Multi Ping

Multi Ping provides a graphical view of your network performance, monitors hundreds of targets, and sends automatic alerts. It can compute packet loss percentage, and average/min/max latencies. This application has the ability to scan a range of IPs and automatically add the responders to the target list.

Multi Ping is a small utility that allows you to easily ping multiple host names and IP addresses, and watch the result in one table. It automatically ping to all hosts every number of seconds that you specify, and displays the number of succeed and failed pings, as well as the average ping time. You can also save the ping result into text/html/xml file, or copy it to the clipboard.

5.) Trace route

In computing, **traceroute** is a computer network diagnostic tool for displaying the route (path) and measuring transit delays of packets across an Internet Protocol (IP) network. The history of the route is recorded as the round-trip times of the packets received from each successive host (remote node) in the route (path); the sum of the mean times in each hop is a measure of the total time spent to establish the connection. Traceroute proceeds unless all (three) sent packets are lost more than twice, then the connection is lost and the route cannot be evaluated. Ping, on the other hand, only computes the final round-trip times from the destination point.

Traceroute, by default, sends a sequence of User Datagram Protocol (UDP) packets addressed to a destination host; ICMP Echo Request or TCP SYN packets can also be used. The time-to-live (TTL) value, also known as hop limit, is used in determining the intermediate routers being traversed towards the destination. Routers decrement TTL values of packets by one when routing and discard packets whose TTL value has reached zero, returning the ICMP error message ICMP Time Exceeded. Common default values for TTL are 128 (Windows OS) and 64 (Unix-based OS).

Traceroute works by sending packets with gradually increasing TTL value, starting with TTL

value of one. The first router receives the packet, decrements the TTL value and drops the packet because it then has TTL value zero. The router sends an ICMP Time Exceeded message back to the source. The next set of packets are given a TTL value of two, so the first router forwards the packets, but the second router drops them and replies with ICMP Time Exceeded. Proceeding in this way, traceroute uses the returned ICMP Time Exceeded messages to build a list of routers that packets traverse, until the destination is reached and returns an ICMP Echo Replymessage.

6.) DNS Lookup

These types of lookups or queries are defined below:

Forward Lookups: Forward lookups are also called forward queries. Forward lookups are used to resolve host names to IP addresses in the DNS domain.
Forward queries contain the following:

- SOA resource record.
- NS resource record.
- Any other record that ties the IP address to the FQDN (excludes the PTR resource record). When forward queries are issued, they are dealt with as follows:
- A resolver requests the IP address for a host name.
- The forward lookup is sent to the DNS server.
- The DNS server searches for an A type resource record that is associated with the host name in the request.
- If the DNS server finds a matching A type resource record, the IP address is returned o the client.
- If the DNS server does not find a match, it proceeds to query the other DNS servers.

7.) System Performance

CPU usage refers to your mobile's processor and how much work it's doing. A high reading means your mobile is running at the maximum level or above normal level for the number of applications running.

Use the Performance tab in Task Manager to view how your computer's central processing unit (CPU)is being used by Android and other programs running on your computer.

The graphs show how much CPU is being used, both at the moment and for the past few minutes. (If the CPU Usage History graph appears split, your computer either has multiple CPUs, a single dual-core CPU, or both.)

A high percentage means that the programs or processes that are running require a lot of CPU resources, which can slow your mobile. If the percentage appears frozen at or near 100%, then a program might not be responding.

8.) System Properties

A feature found in Windows that displays basic overview of your mobile, System Properties allows the user to customize many system settings and access Device Manager. Below are examples of how the Android System Properties window may look.

Tools and Technology

APPLICATION LANGUAGE
JAVA
XML
HTML & JavaScript

DATABASE
SQLITE

PROGRAMMING TOOLS (IDE)
ANDROID STUDIO
NOTEPAD++
JSON EDITOR ONLINE
ADOBE PHOTOSHOP CS6

DOCUMENTATION SOFTWARES
EDRAW MAX
MICROSOFT WORD 2013
MICROSOFT VISIO
PENCIL UI
JUSTINMIND PROTOTYPER

TECHNOLOGIES AND FRAMEWORK
ANDROID SDK
JSON
Open Source Android Libraries
REST APIs

TESTING HARDWARE AND SOFTWARE
EMULATORS
ANDROID PHONES
ANDROID TABLETS

Environmental Characteristics

Hardware and Peripherals

- Internet Connection on the device
- Android Phone or Tablet running at least Android 2.3(Gingerbread)

Users

- General Non IT User
- IT Professional
- Network Administrator

7. Project Management

PROJECT PLANNING

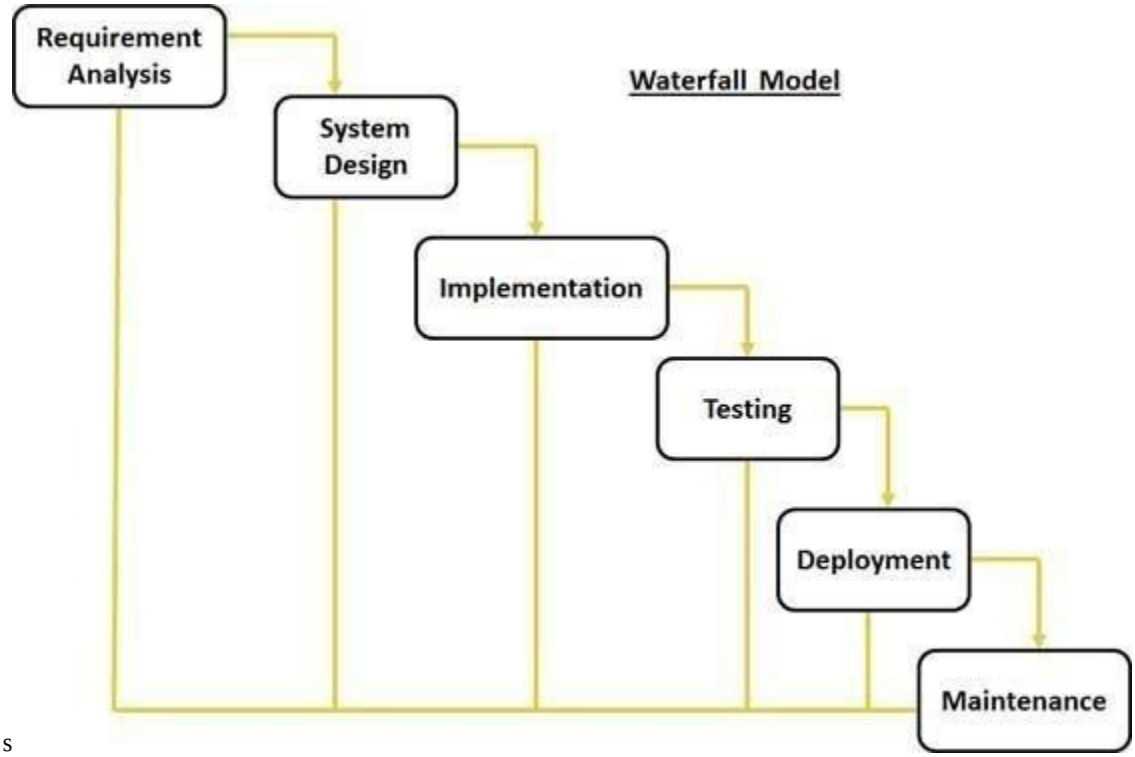
Project Development Approach and Justification

Software process model is an abstract representation of a software process. Each Process model represents a process from a particular perspective so only provides partial information about that process. These generic models are not definitive descriptions of software processes. Rather, they are useful abstractions, which can be used to explain different approaches to software developments.

ANALYSIS MODEL

The model that is basically being followed is the WATER FALL MODEL, which states that the phases are organized in a linear order. First of all the feasibility study is done. Once that part is over the requirement analysis and project planning begins. The design starts after the requirement analysis is complete and the coding begins after the design is complete. Once the programming is completed, the testing is done. In this model the sequence of activities performed in a software development project are: -

- Requirement Analysis
- Project Planning
- System design
- Coding
- Testing
- System integration &testing
- Maintenance



s

Fig.1

- ✓ **Requirement Gathering and analysis:** All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

- ✓ **System Design:** The requirement specifications from first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

- ✓ **Implementation:** With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

- ✓ **Integration and Testing:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

- ✓ **Deployment of system:** Once the functional and non functional testing is done, the product is deployed in the customer environment or released into the market.

- ✓ **Maintenance:** There are some issues which come up in the client environment.

Waterfall Model Pros & Cons Advantage:

- ✓ The advantage of waterfall development is that it allows for departmentalization and control. A schedule can be set with deadlines for each stage of development and a product can proceed through the development process model phases one byone.
- ✓ Development moves from concept, through design, implementation, testing, installation, troubleshooting, and ends up at operation and maintenance. Eachphase of development proceeds in strictorder.

Disadvantage:

- ✓ The disadvantage of waterfall development is that it does not allow for much reflection or revision. Once an application is in the testing stage, it is very difficult to go back and change something that was not well-documented or thought upon in the concept stage.

Project Plan

Project planning is basically concerned with identifying and measuring activities. Thus in this section we cover some basic attributes of the project.

- ✓ **Duration**: How long will it take to complete the development?
  - The duration of the planning can be approximately 10 months.

- ✓ **Efforts**: How much efforts would berequired?
  - Here is a group of four members so the work can be divided between them. So the efforts can be estimated to 5 hour of weekdays of single member for 10 months. Every member takes part in the all stages of the model but all work would be divided in parts equally, so the efforts will be applied by each member on the project model which will make faster the process of model to complete.

Milestones and Deliverable

Milestones:

- ✓ Milestone is an end-point of the software processactivity.
- ✓ At each milestone there should be formal output such as report.

- ✓ Milestone report need not be large document; this should be short report of achievement in software projectactivity.
- ✓ Milestone represents end of the distinct, logical state in the project.

Deliverable:

- ✓ Deliverable is a project report that delivers to the customer.
- ✓ Deliverables are delivered to the customer at the end of some major project phase such as analysis, design,etc.

Roles and Responsibilities

In our project, team members work equally on given work as divided with all efforts. Each member of the team has been given responsibilities which they follow for better development of a project. Each member has its own role like for programming, designing etc.

Group Dependencies

Our project work is divided into four parts between each team member while each member may be dependent on the work of other like when certain part of one of the team member is finished other team member's parts comes where he is to start his work. Here every team members help to others so everyone makes out with every details in project clearly.

PROJECT SCHEDULING

Basic Principal

"Software project scheduling is an activity that distributes estimated effort across the planned project duration by allocating the effort to specific defined software engineering tasks."

Proper scheduling requires:

- ✓ Effort and timing are intelligently allocated to eachtask.
- ✓ All tasks appear in network and dependent on some ofother.
- ✓ Interdependencies between tasks are properlyindicated.
- ✓ Resources are allocated for the work to bedone.

Work Breakdown Structure

Here is a work breakdown structure. The work is broken down in parts which are carried out in a sequence manner over the period of time.

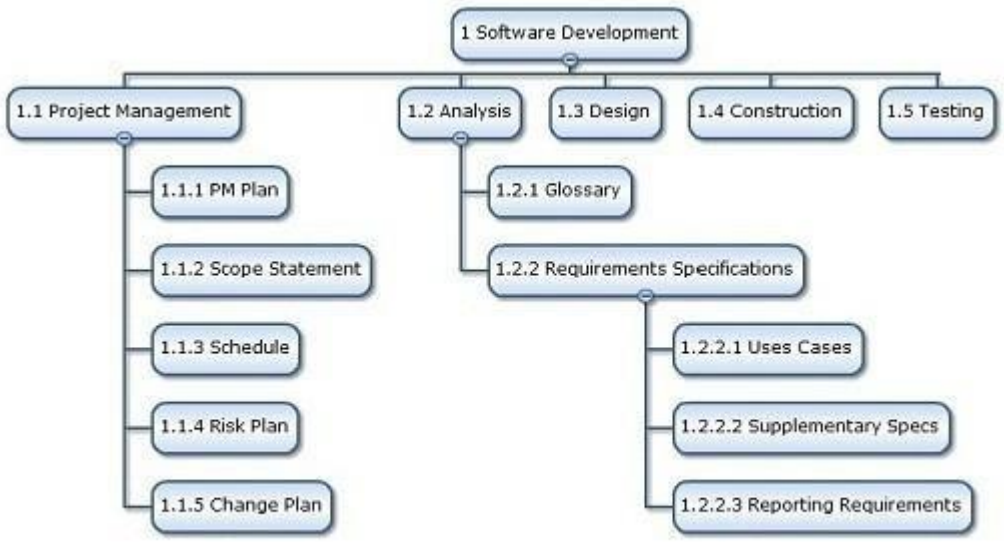


Fig.2

8. RISK MANAGEMENT

Risk management is an extremely important task in all projects and so it is in this project as well. Software is a difficult undertaking. So lots of things can go wrong. It is for reason that being prepared understanding the risks and taking proactive measure to avoid or manage them is a key element of good Software Project Management. Recognizing what can go wrong is the first step called Risk identification. Next each is analyzed to determine that it will occur and the damage that it will do if it does occur. Once this information is established, risks are ranked, by probability and impact. Finally a Plan is developed to manage those risks with highprobability.

Risk Identification

There are certain risks that if run true, it can not only run the whole effort and foil the project plans, can cause some serious danger.

Table 1. Risk Type

Risk Type	Description
Project Risks	Implementation lethargies. Unclear and yet very wide set of requirements.
Technical Risks	The feel of the system if not right can defeat the whole purpose Performance issues Scalability problem Compatibility of end user machines needs to be taken into consideration Security Issues

Risk Analysis

A project can get affected by a large variety of risks. In order to be systematically identify the important risk which might affect the project it is necessary to define risks into different classes which we will discuss in next section. During this phase identification risk is considered in turn and judgment is made about the probability and the seriousness of the risk.

Table 2. Risk Analysis

Risk	Probability	Effects
Software components which should be reused contain defects limit their functionality.	Moderate	Serious
Change of requirements which require proposal of major design rework.	High Moderate	Serious
Scheduling slippage: The time required for the development of software is underestimated, so schedule slippage will occur.	High	Serious
The size of software is Underestimated.	High	Tolerable
Power Failure.	High	Tolerable
Inexperienced team member.	Medium	Tolerable

Risk Planning

Risk planning process is considered when each of the key risk has been identified. Risk reduction Strategy is used as abatement procedure. This involves planning ways to contain the damage due to a risk.

Table 3. Risk Planning

Risk	Strategy
Requirement Changes	Derive traceability information to access requirements, change impact and maximize information hiding.
Power Failure	To reduce the risk, backup storage facility is used.
Schedule risk	To reduce this risk, we are going to complete our project according to our schedule.
Performance	Investigate Database which can effectively process.

9.REQUIREMENT ANALYSIS

Functional Requirements

The functional requirement will define the fundamental functioning that the system should perform:

- ✓The application should display the following for connected network
  - Name(SSID)
  - BSSID
  - Public IP
  - Discovery Date

- ✓The application should display the following for each device connected to thenetwork
  - Name of Device(As given by device user)
  - IP Address
  - MAC Address
  - Vendor name
  - Discovery Date

- ✓The application should allow app user to enter its your own names, icons, notes and location.

- ✓The application should allow full search by IP, MAC, Name, Vendor and Notes

- ✓The application should store history of all discoverednetworks.

- ✓The application should allow us to share via Twitter, Facebook and E-mail.

- ✓The application should provide functionalities like:
  - Service Scan: Find hundreds of open ports in a few seconds
  - Automatic DNS lookup and reverse lookup
  - Wake On LAN: Switch on your devices from your mobile ortablet!
  - Ping and traceroute: Understand your network performances.

- ✓The application should check the availability to Internet Connection

✓The application should able to check when deice has gone offline and online.

✓The application should display NetBIOS names and properties.

✓The application should provide facility of arranging devices by IP, MAC, Name,Vendor, State, Last Change.

✓The application should provide facility to scan all open ports fordevice.

✓The application should be able to launch Apps for specific ports, such as Browser, FTPetc.

✓The application should save the scanned port information.

✓The application should provide automatic DNS lookup and reverse lookup facility.

✓The application should save the DNS lookup information.

✓The application should provide facility of Benchmarking- To assess the relative performance of device by Hardware test, CPU test, Battery test.

✓The application should check if server is DDoS prone or not.

✓The application should include IP Calculator which shows you the subnet host address range, the subnet ID, and the subnet broadcast address The binary representation and hexadecimal representations of IP addresses are supported.

Non-Functional Requirement

1.) Performance

- ✓ The system must be interactive and the delays involved must be less.
- ✓ The system shall not show any lag in operation of more than 2 seconds.
- ✓ The system shall have minimum mobile data consumption.
- ✓ The system shall be easy to use and learn i.e. efficient Usability.
- ✓ The system shall perform efficiently without utilizing excessive resources like RAM, Battery, etc.

2.) Reliability

- ✓ The system shall be available for service to the end user in 99 out of 100 times i.e. efficient availability.
- ✓ The system, if interrupted in between, shall be able to continue its operation from that point only, and should not start from the beginning.
- ✓ The system shall have minimum Mean Time between Failure.

3) Security

- ✓ The system shall not allow unauthorized users to access the data.
- ✓ The system shall be able to defend itself from accidental or malicious damage.
- ✓ The access permissions for system data may only be changed by the system's data administrator.
- ✓ All system data must be backed up every 24 hours and the backup copies stored in a secure location which is not in the same building as the system.
- ✓ All external communications between the system's data server and clients must be encrypted.

4.) Interoperability

- ✓ The system shall be able to operate on all Android phones and tablets running Android Gingerbread 2.3 or above.

10. SYSTEM ANALYSIS

FEASIBILITY STUDY

Preliminary investigation examine project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation.

- ✓ Technical Feasibility
- ✓ Operational Feasibility
- ✓ Economic Feasibility

TECHNICAL FEASIBILITY

Technical Feasibility centers on the existing computer system hardware, software, etc. and to some extent how it can support the proposed addition. This involves financial considerations to accommodate technical enhancements. Technical support is also a reason for the success of the project. The techniques needed for the system should be available and it must be reasonable to use. Technical Feasibility is mainly concerned with the study of function, performance, and constraints that may affect the ability to achieve the system. By conducting an efficient technical feasibility we need to ensure that the project works to solve the existing problem area.

Since the project is designed with Android as Front end and Java and SQLite as Back end, it is easy to install in all the systems wherever needed. It is more efficient, easy and user-friendly to understand by almost everyone. Huge amount of data can be handled efficiently using SQL Server as back end. Hence this project has good technical feasibility.

OPERATIONAL FEASIBILITY

People are inherently instant to change and computers have been known to facilitate change. An estimate should be made to how strong a reaction the user staff is likely to have towards the development of the computerized system.

The staff is accustomed to computerized systems. These kinds of systems are becoming more common day by day for evaluation of the software engineers. Hence, this system is operationally feasible. As this system is technically, economically and operationally feasible, this system is judged feasible.

ECONOMIC FEASIBILITY

The role of interface design is to reconcile the differences that prevail among the software engineer's design model, the designed system meet the end user requirement with economical way at minimal cost within the affordable price by encouraging more of proposed system. Economic feasibility is concerned with comparing the development cost with the income/benefit derived from the developed system. In this we need to derive how this project will help the management to take effective decisions.

Economic Feasibility is mainly concerned with the cost incurred in the implementation of the software. Since this project is developed using Android Studio which is more commonly available and even the cost involved in the installation process is not high.
Similarly it is easy to recruit persons for operating the software since almost all the people are aware of Android and SQL Server. Even if we want to train the persons in these area the cost involved in training is also very less. Hence this project has good economic feasibility.

The system once developed must be used efficiently. Otherwise there is no meaning for developing the system. For this a careful study of the existing system and its drawbacks are needed. The user should be able to distinguish the existing one and proposed one, so that one must be able to appreciate the characteristics of the proposed system, the manual one is not highly reliable and also is considerably fast. The proposed system is efficient, reliable and also quickly responding.

INPUT AND OUTPUTS

The major inputs and outputs and major functions of the system are follows:

Inputs:

Some of inputs for different functionality:

1. IP Address with subnet mask
2. Host Name or IP address for Ping
3. Host Name for DNS Lookup
4. Host Name for Traceroute
5. More than one Host Name for Multi Ping.

User can also share the output of the particular functionality by choosing particular sharing media.

Outputs:

Some of outputs for different functionality:

1. IP calculator functionality gives the output which contains Netmask, Broadcast Address and range of the IP address.

2. Network discovery functionality shows all the connected devices which are connected in one network.

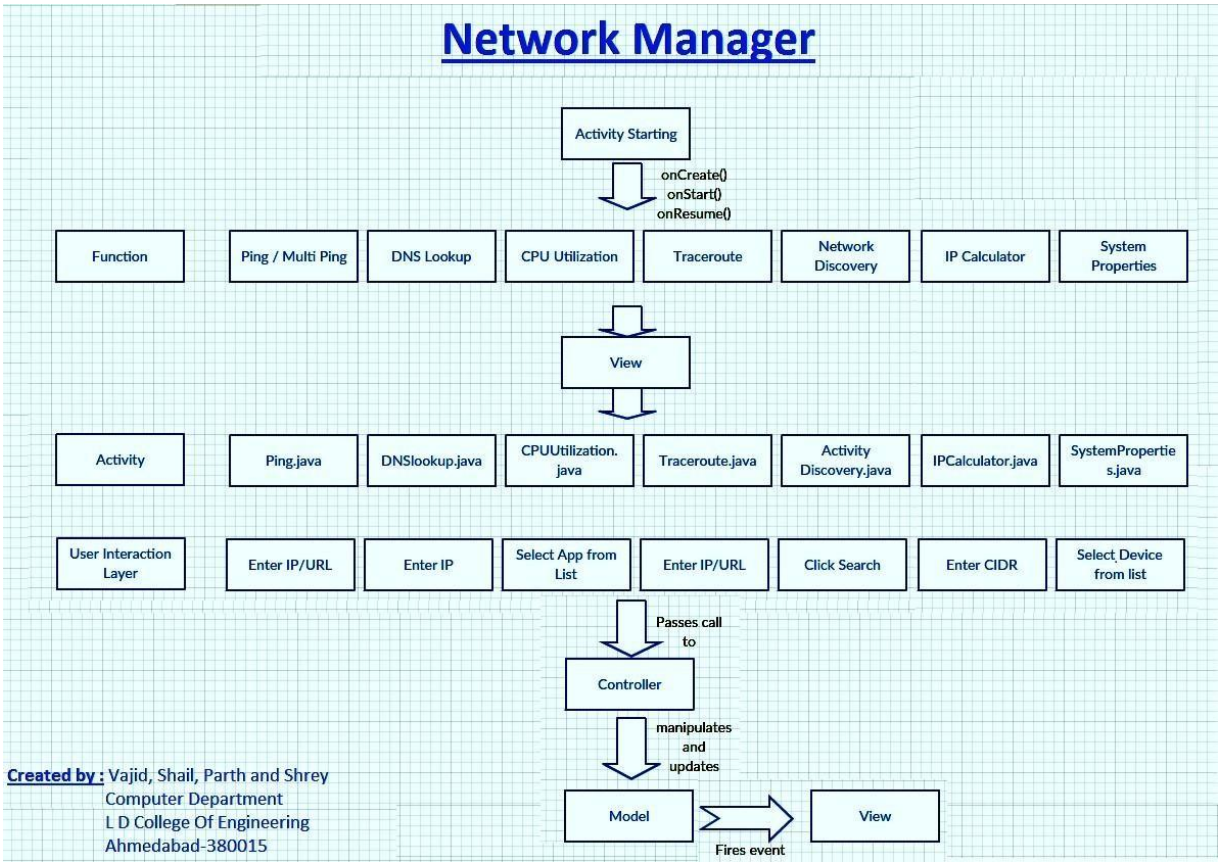
3. System properties shows all the hardware details of particular devuces.

4. Dns Lookup returns the IP address of given Host Name.

5. Ping gives ping log and TTL of particular Host Name so that we can come to know this host name is accessible or not from our computer.

11. UML DIAGRAMS

BASIC DIAGRAM

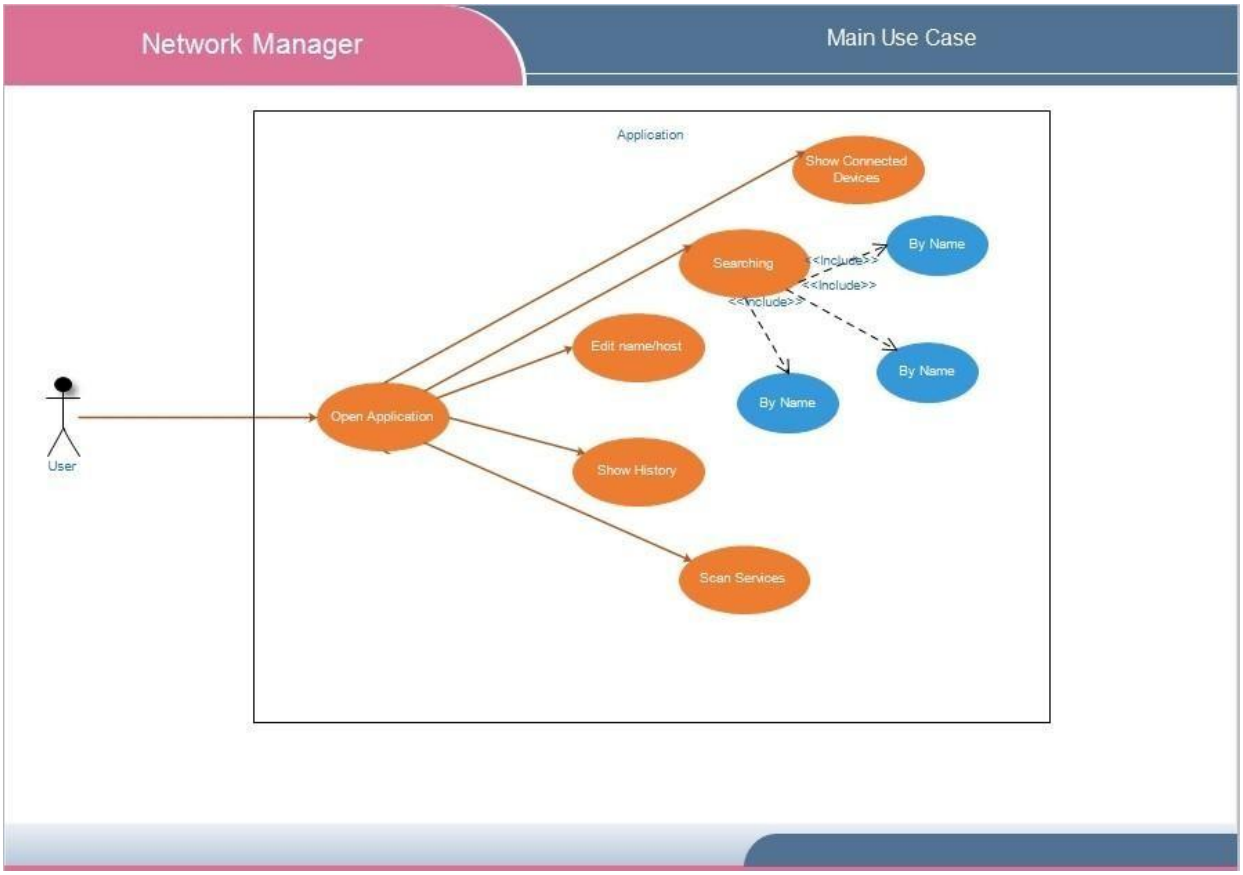


USE CASE DIAGRAM

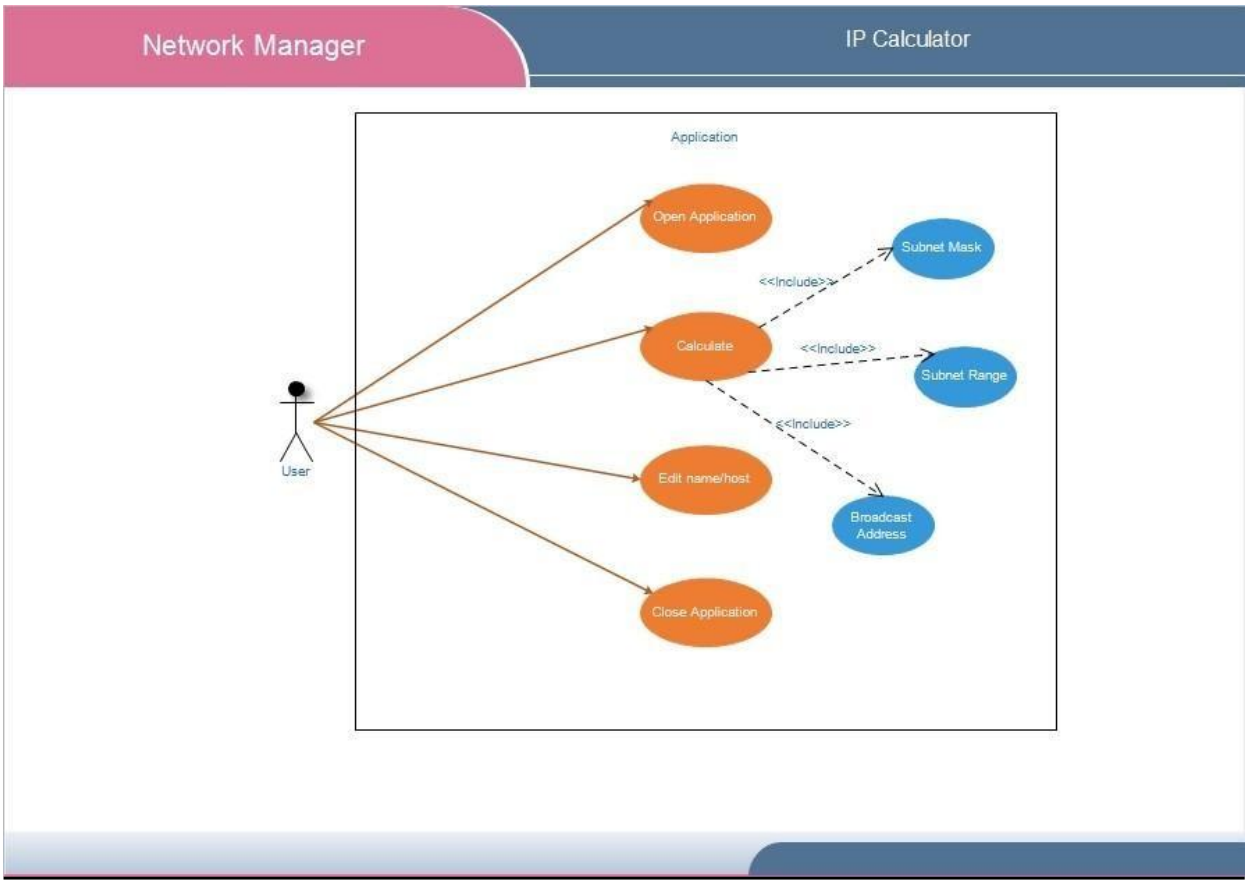
Use cases model the system from the end users point of view, with the following objectives:

- To define the functional and operational requirements of the system by defining scenario of usage.
- To provide a class and unambiguous description of how the end user and the systems interact with one another.
- To provide a basis for validation testing.

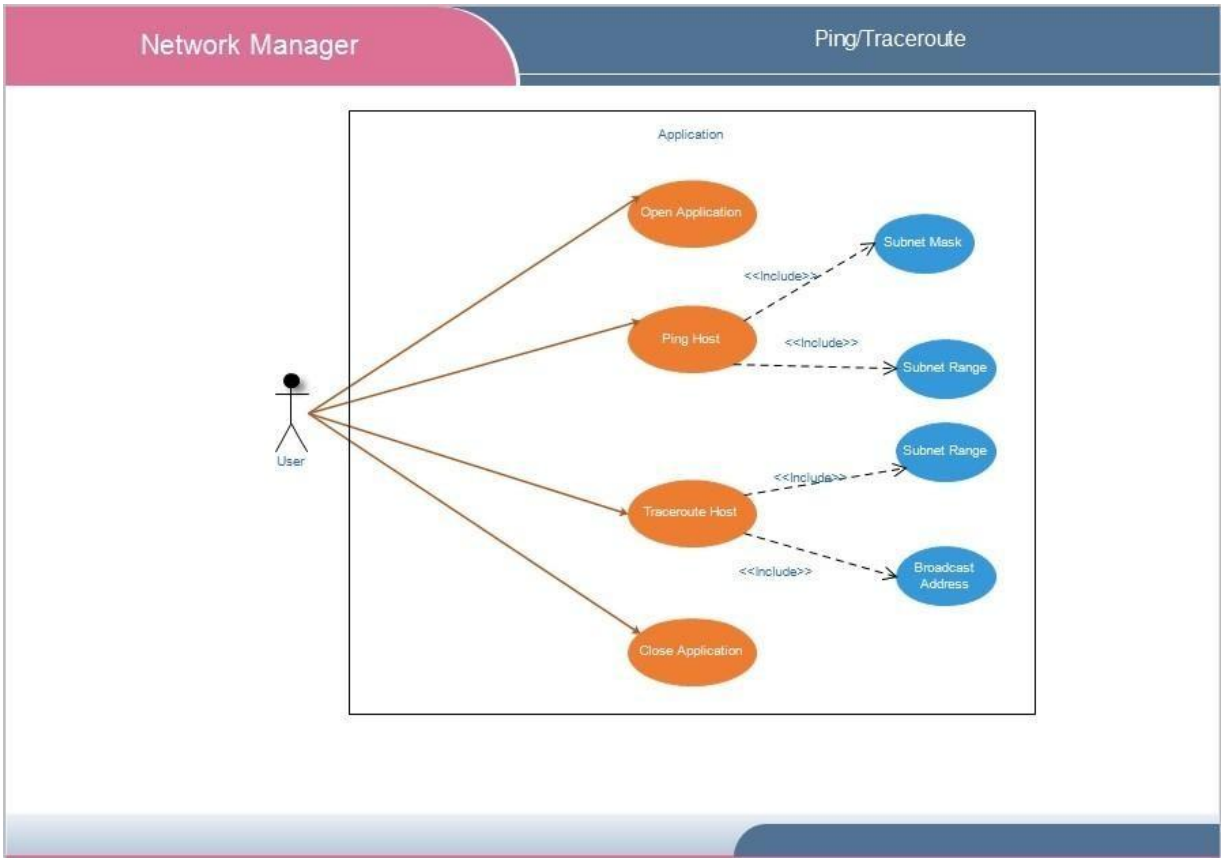
MAIN USE CASE



IP CALCULATOR USE CASE



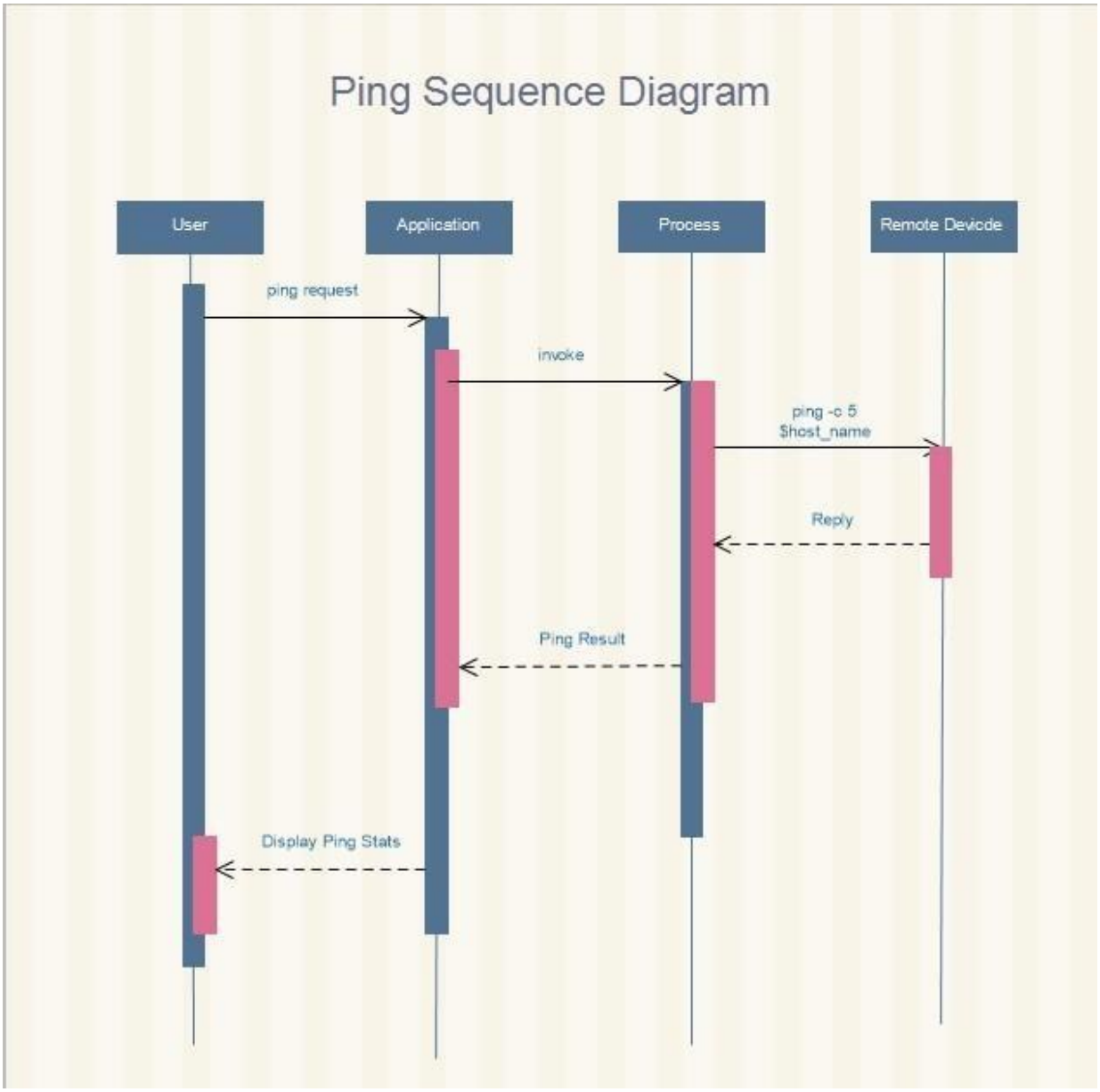
PING & TRACEROUTE USE CASE



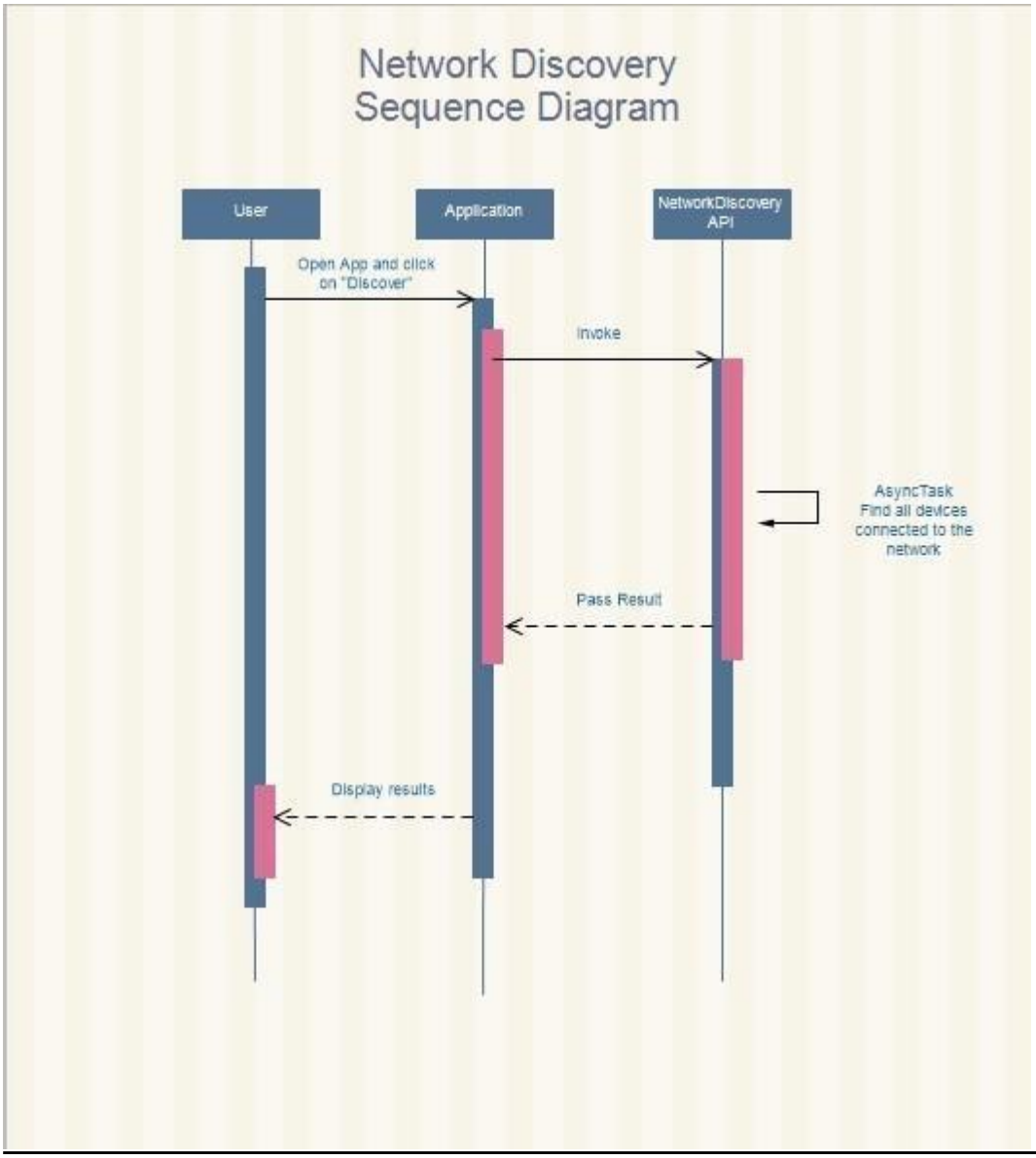
SEQUENCE DIAGRAM

- A Sequence diagram is an interaction diagram that shows how processes operate with one a nother an
- It is a construct of a Message Sequence Chart. A sequence diagram shows object interactions arranged in time sequence.
- It depicts the objects and classes involved in the scenario and the sequence of messages excha nged between the objects needed to carry out the functionality of the scenario.
- Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development.

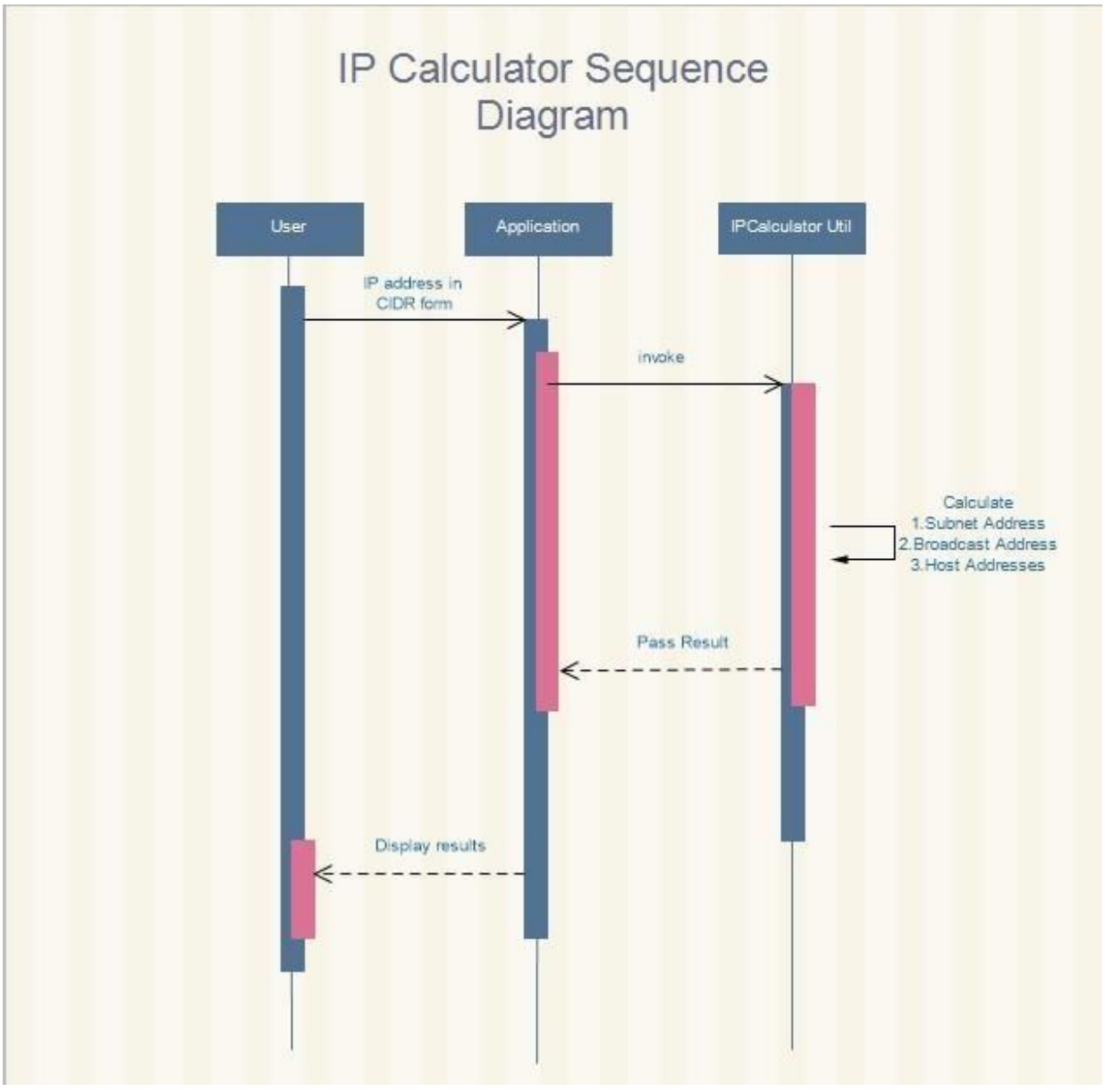
PING SEQUENCE DIAGRAM



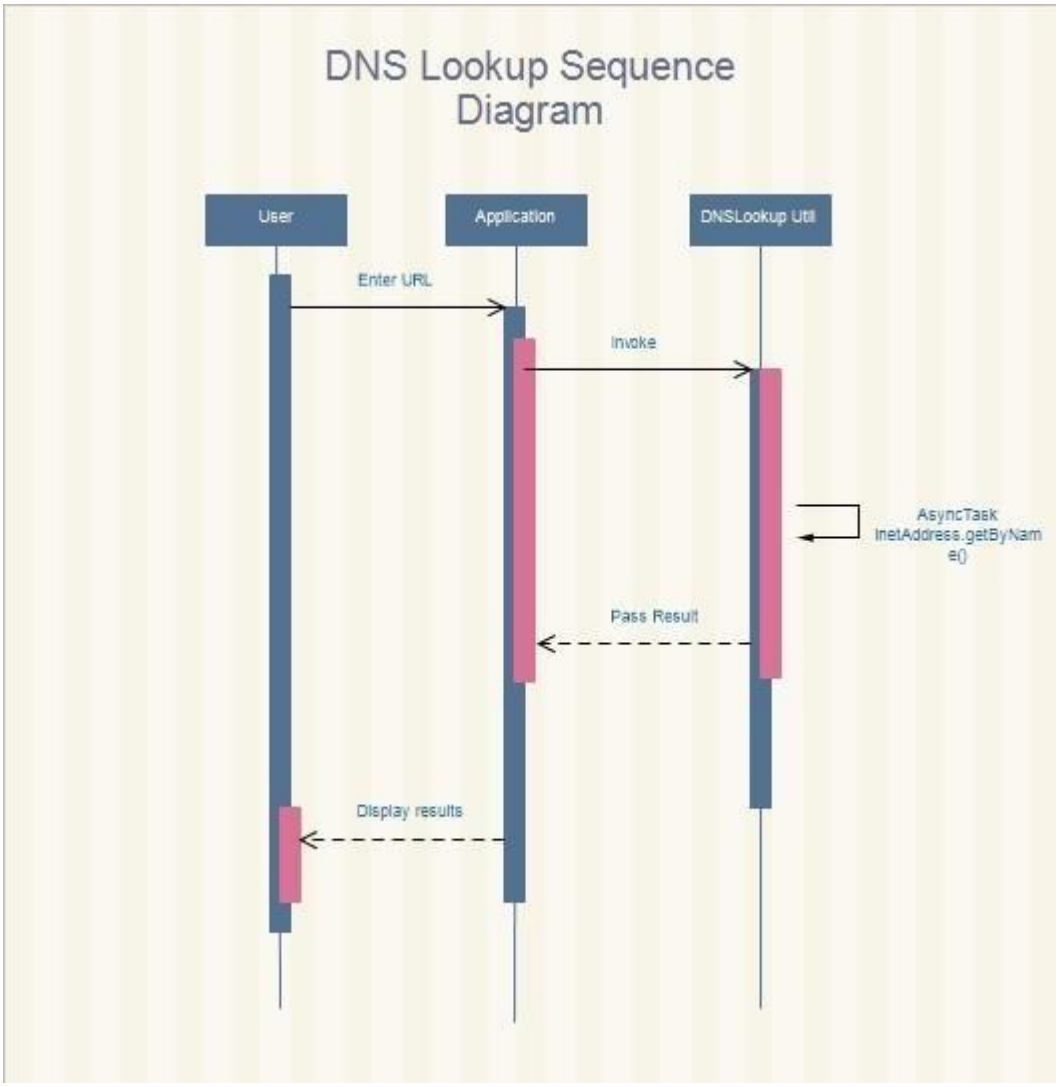
NETWORK DISCOVERY SEQUENCE DIAGRAM



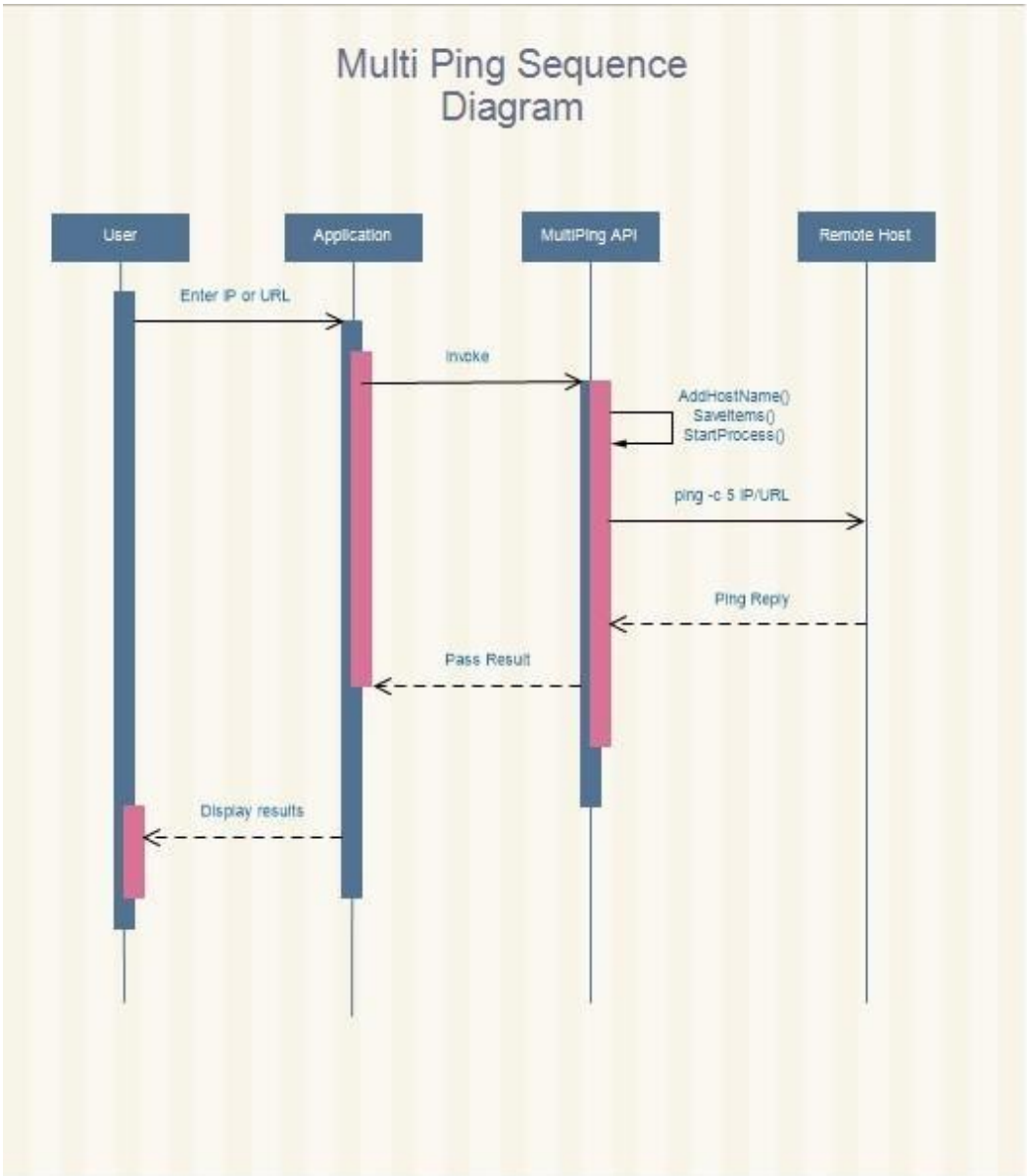
IP CALCULATOR SEQUENCE DIAGRAM



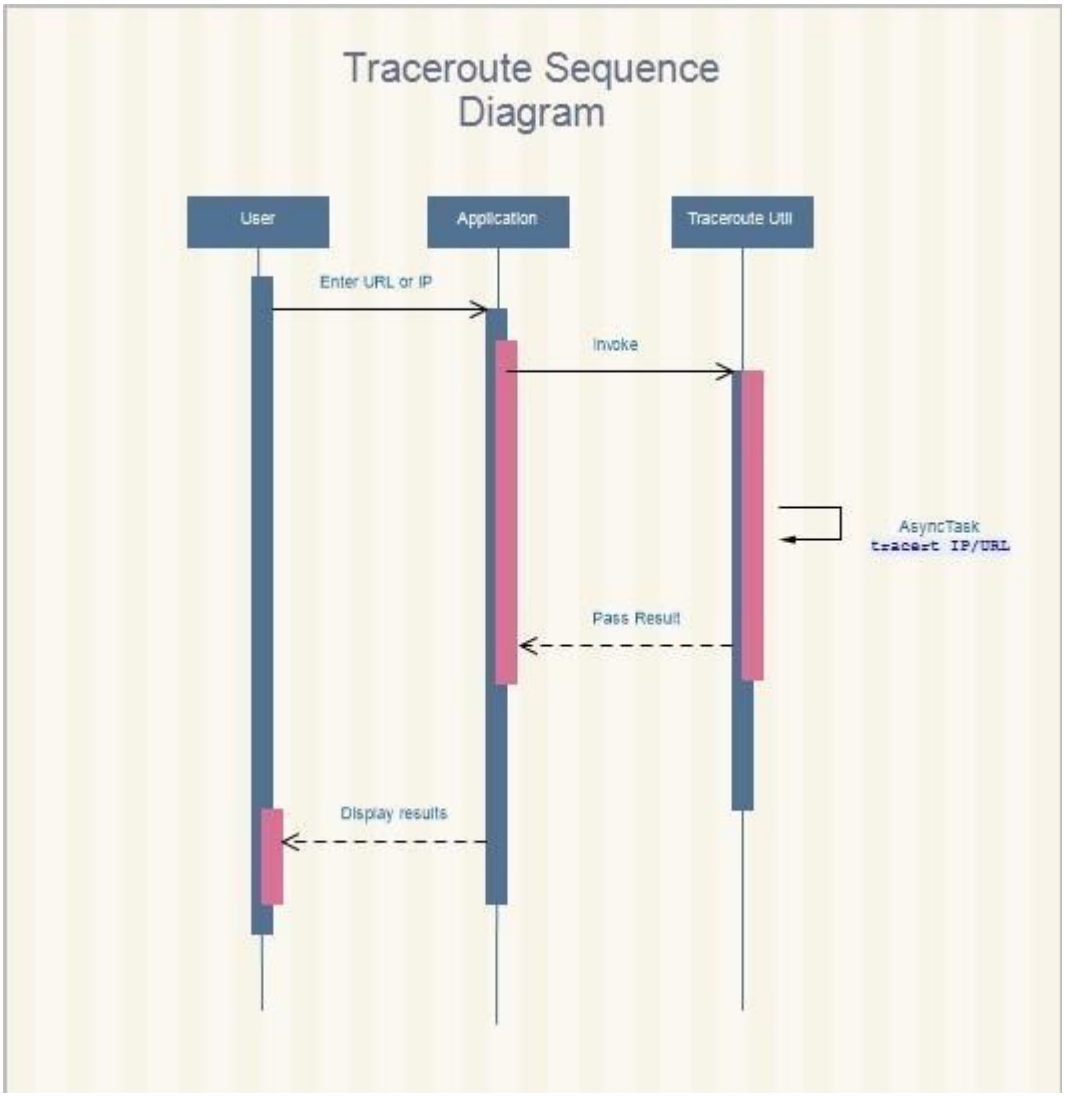
DNS Lookup Sequence



MULTIPING SEQUENCE DIAGRAM



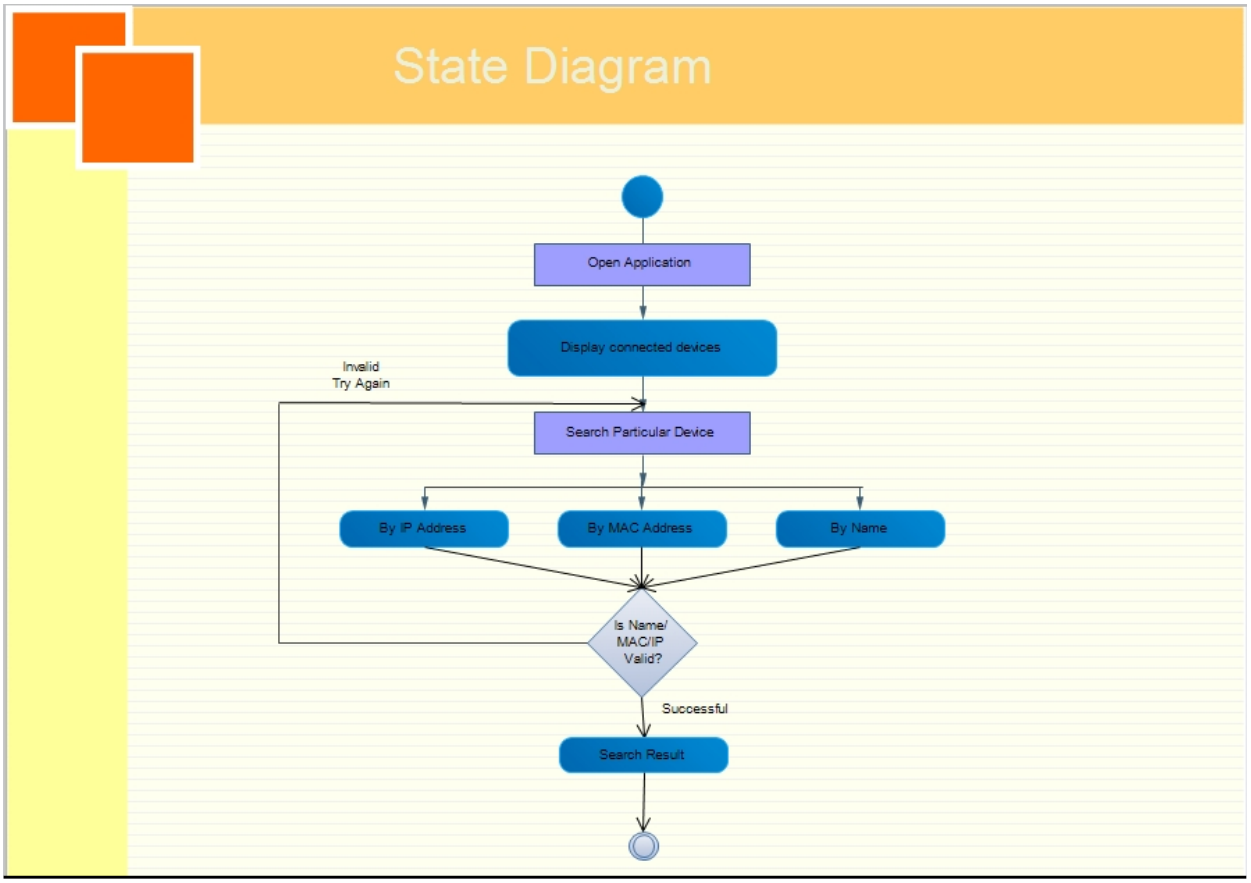
TRACEROUTE SEQUENCE DIAGRAM



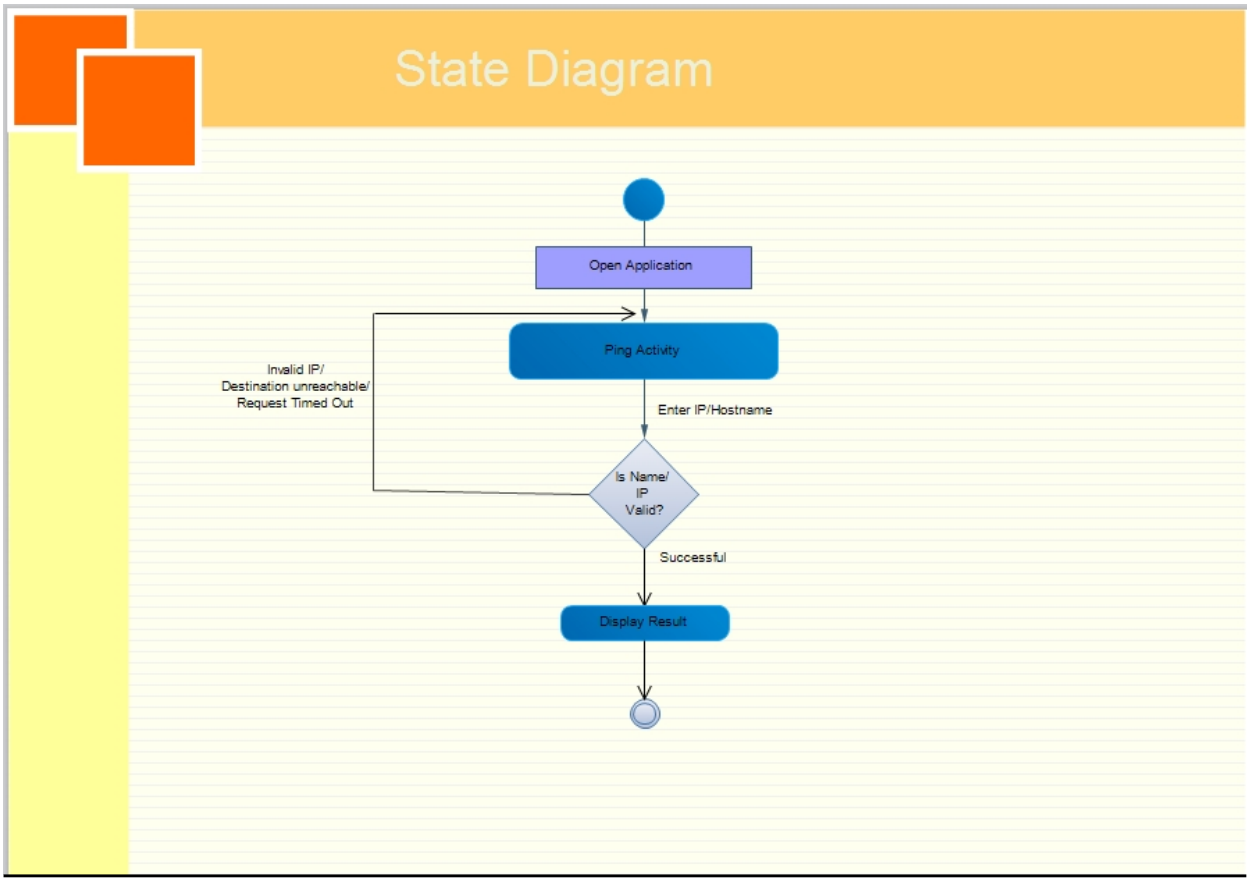
11.3 STATE DIAGRAM

- Stat diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency.
- In the Unified Modeling Language, Static diagrams are intended to model both computation and organizational processes (i.e. workflows). State diagrams show the overall flow of control.

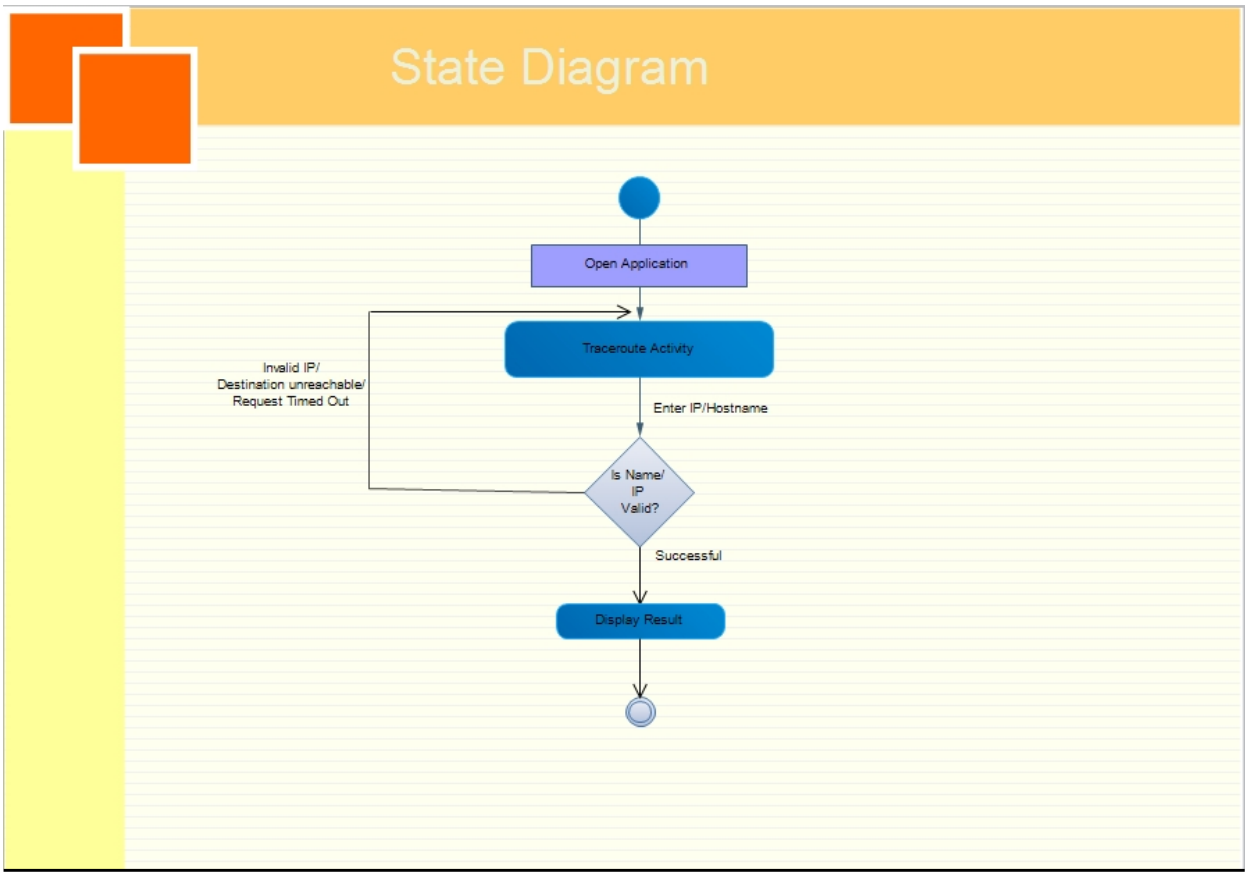
MAIN STATE DIAGRAM



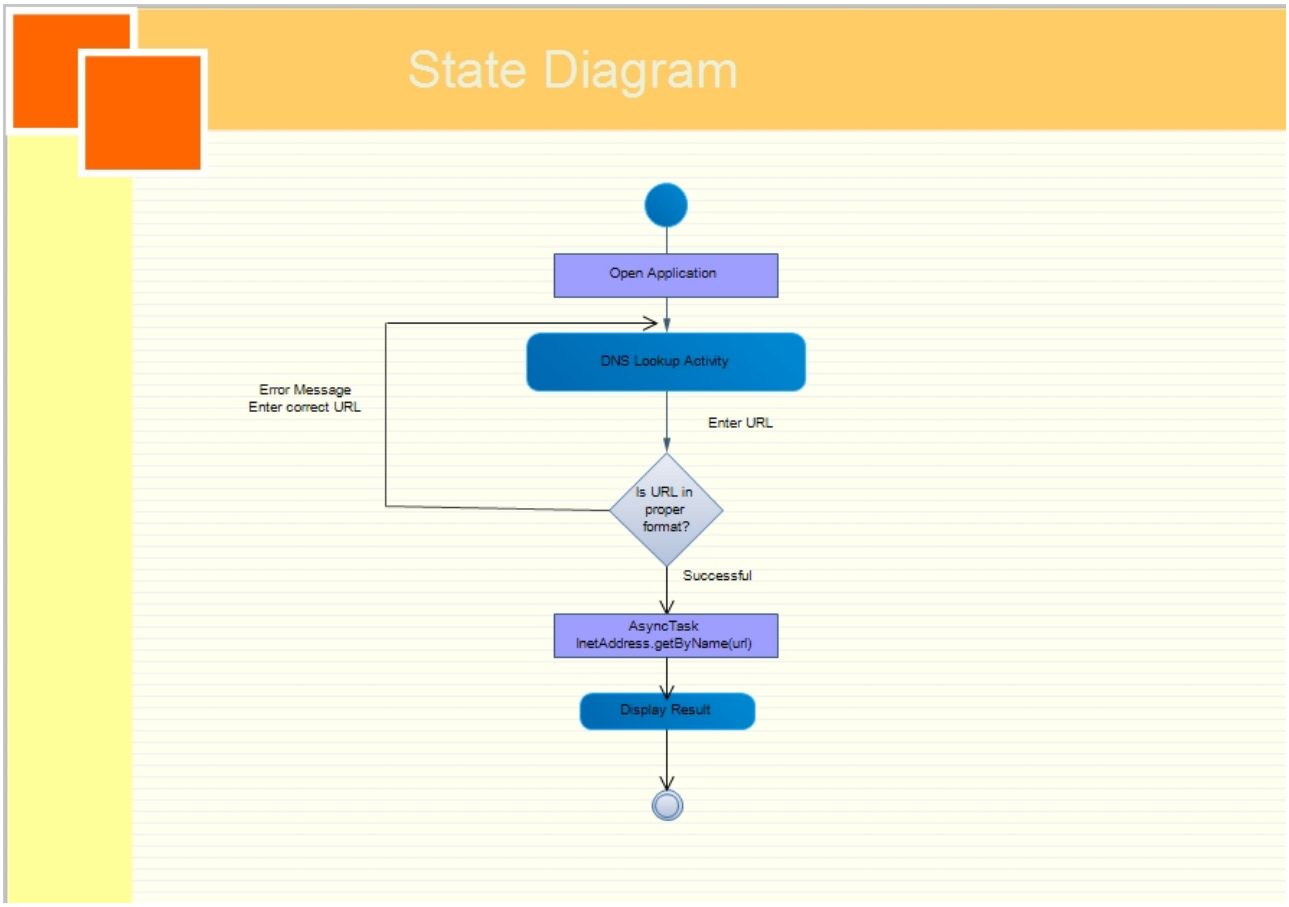
PING STATE DIAGRAM



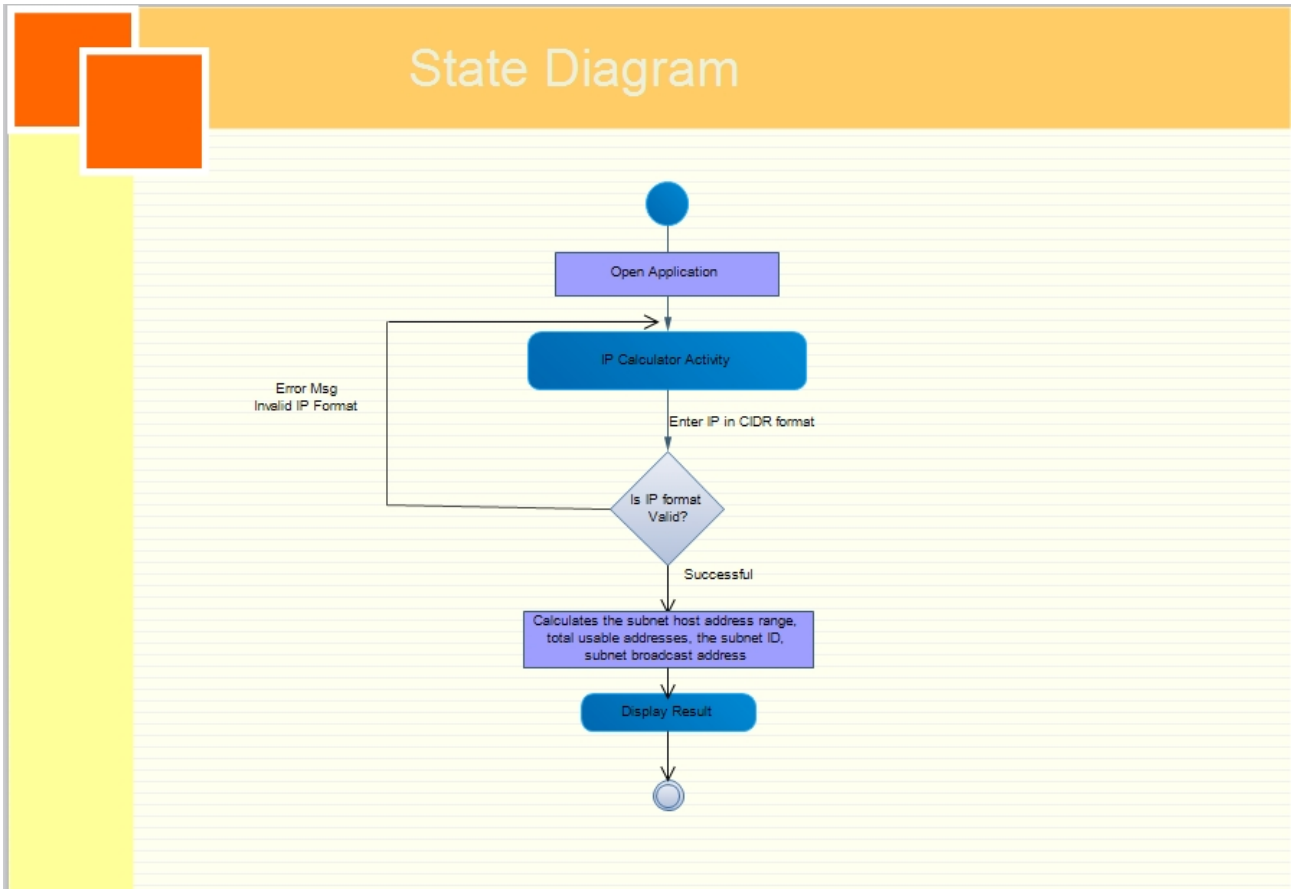
TRACEROUTE ACTIVITY DIAGRAM



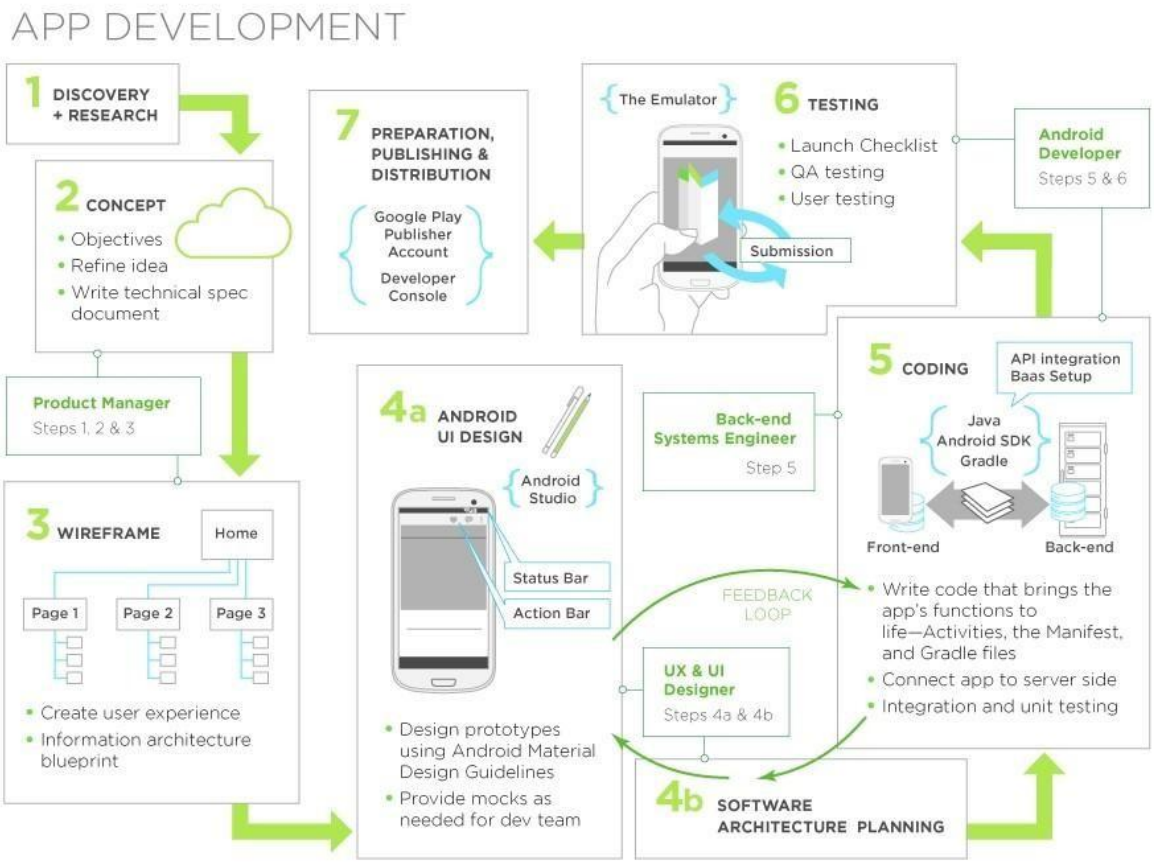
DNS LOOKUP STATE DIAGRAM



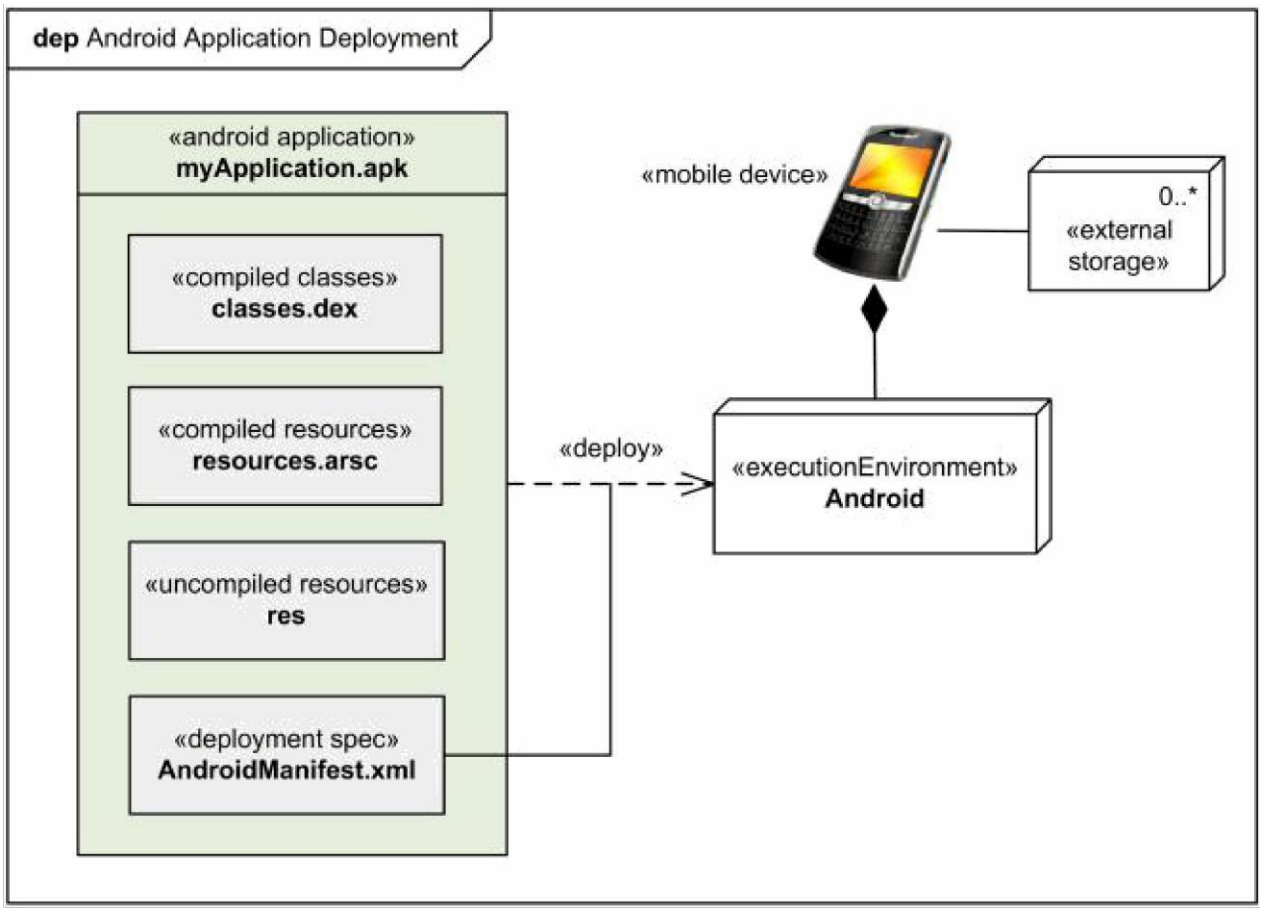
IP CALCULATOR STATE DIAGRAM



Development Diagram



Deployment Diagram



12.DATA DICTIONARY

- ✓ A data dictionary is a catalog-a repository –of the element in a system .As the name suggest these element centers around data and the way they are structured list of the entire element composing the data flowing through a system. The major elementsare data flows, data store, and processes. The data dictionary stores details and decrypting of these elements.

- ✓ If analysis want to known how many characters are in data item, by what other name it is referenced in the system ,or where it is used in the system, they should be able to find the answer In a properly developed data dictionary

- ✓ The dictionary is developed during data flow analysis and assists the analysis involved in determining systems requirement. However, as we will see later in the book, it contents are used during system design as well.

Table 12.1: Network Detail

Field Name	Data Type (With Size)	Constraint	Description
Name(SSID)	Varchar(20)	Primary Key	Name of Network
BSSID	Varchar(20)	Not null	HEXA
External_ip	Long	Not null	Public IP
Discovery_date	Timestamp	Not null	Date on which first discovered
Last Updated	Timestamp	Not null	Date on which last updated

Table 12.2 Well Known Services

Field Name	Data Type (With Size)	Constraint	Description
Id	Integer	Primary Key	For Uniqueness
Port Number	Integer	Not null	Port Number
Name of Service	Varchar(20)	Not null	Port Name

Table 12.3 Device Detail

Field Name	Data Type	Constraint	Description
DeviceName	Varchar(20)	Primary Key	Name of Device
SSID	Varchar(20)	Primary Key	Network name
Vendor	Varchar(20)	Not null	Vendor of device.
IP	Long	Not null	Private IP
MAC	Long	Not null	MAC address of device
Discovery_date	Timestamp	Not null	Date on which first discovered
Last Updated	Timestamp	Not null	Date on which last updated
Alias	Varchar(20)	-	Application User specific name
Location	Varchar(20)	-	Application User specific Location
Notes	Varchar(20)	-	Application User specific

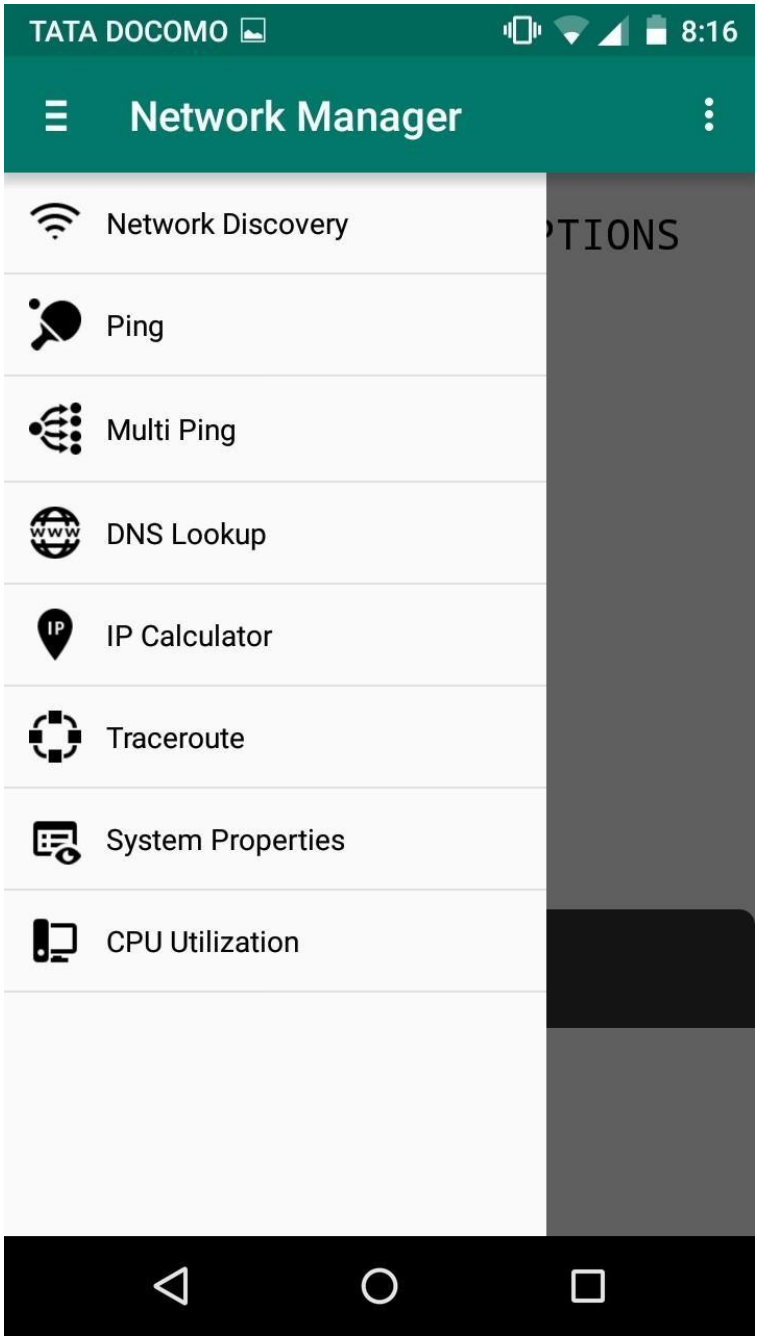
Table 12.4 : Device Favorites

Field Name	Data Type (With Size)	Constraint	Description
Id	Integer	Primary Key	For Uniqueness
IP	Long	Not null	Private IP
MAC	Long	Not null	MAC address of device
Ping result	Varchar(20)	-	Statistcs of ping
Traceroute result	Varchar(20)	-	Statistics of traceroute
Last Updated	Time Stamp	Not Null	Date on which last updated

13.USER INTERFACE

SS-1

- This is home screen.
- It displays the list of devices connected to the wifi network to which the device is currently connected.



SS-2

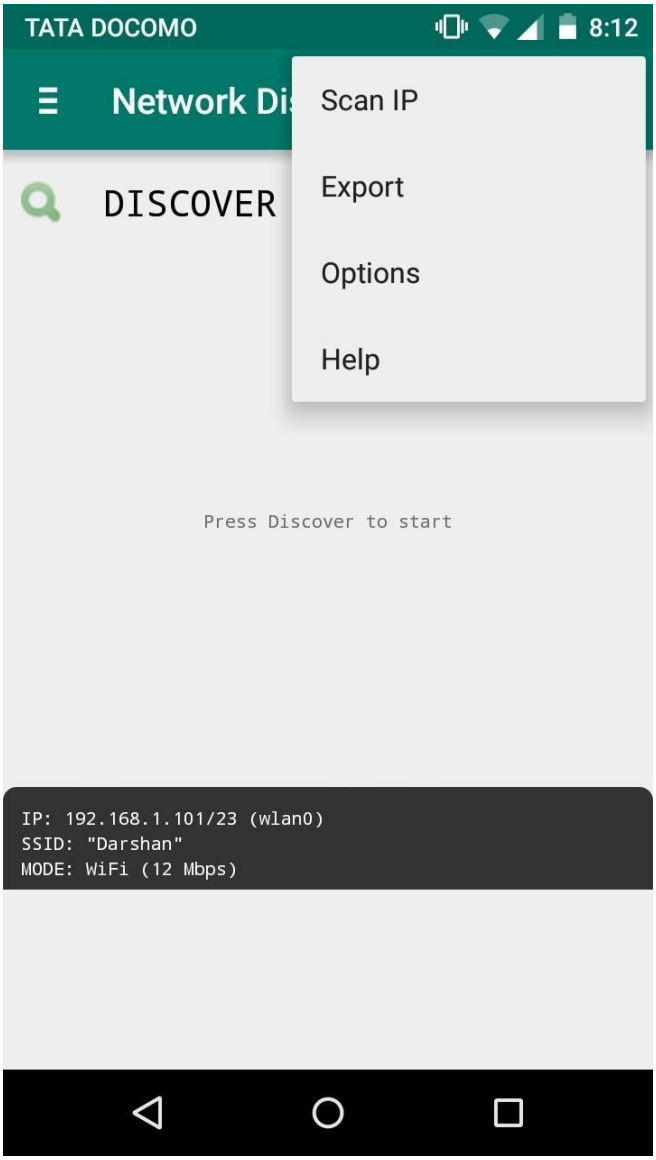
- This is the list of functionalities supported by the Network Manager Application.

SS-3

- This screen shows the Devices connected to the wifi network whoose SSID is shown.
- By this way, we can discover and monitor the devices connected to our wifi network.

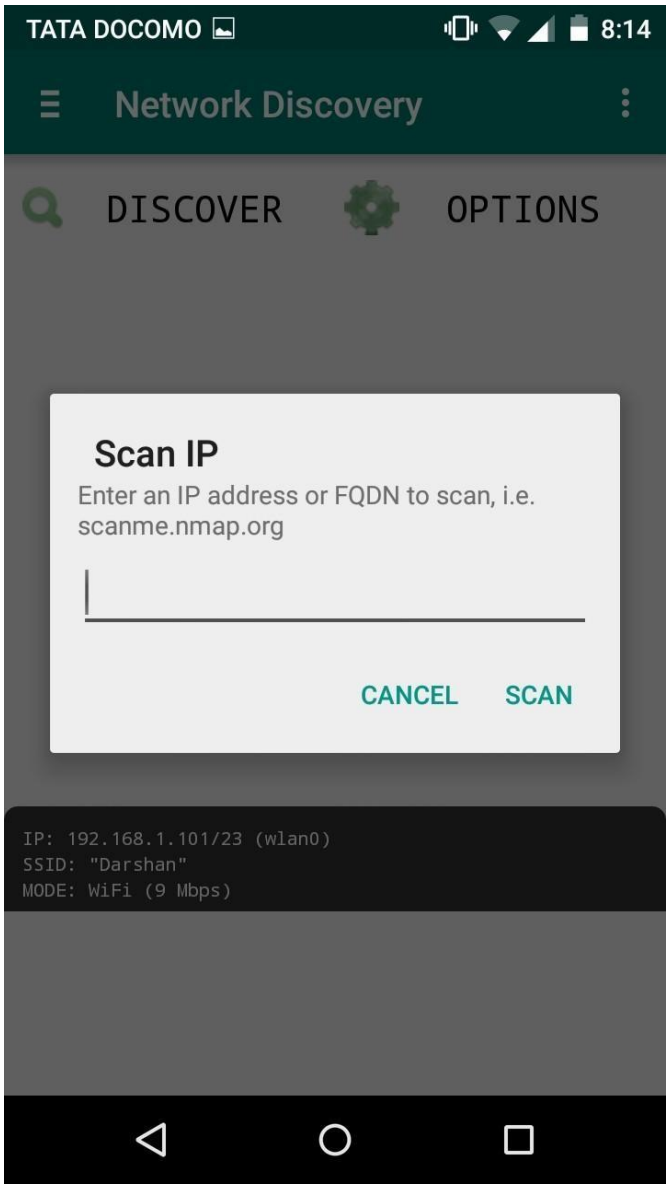
SS-4

- The discovery of the connected devices is finished as shown in the above screen.



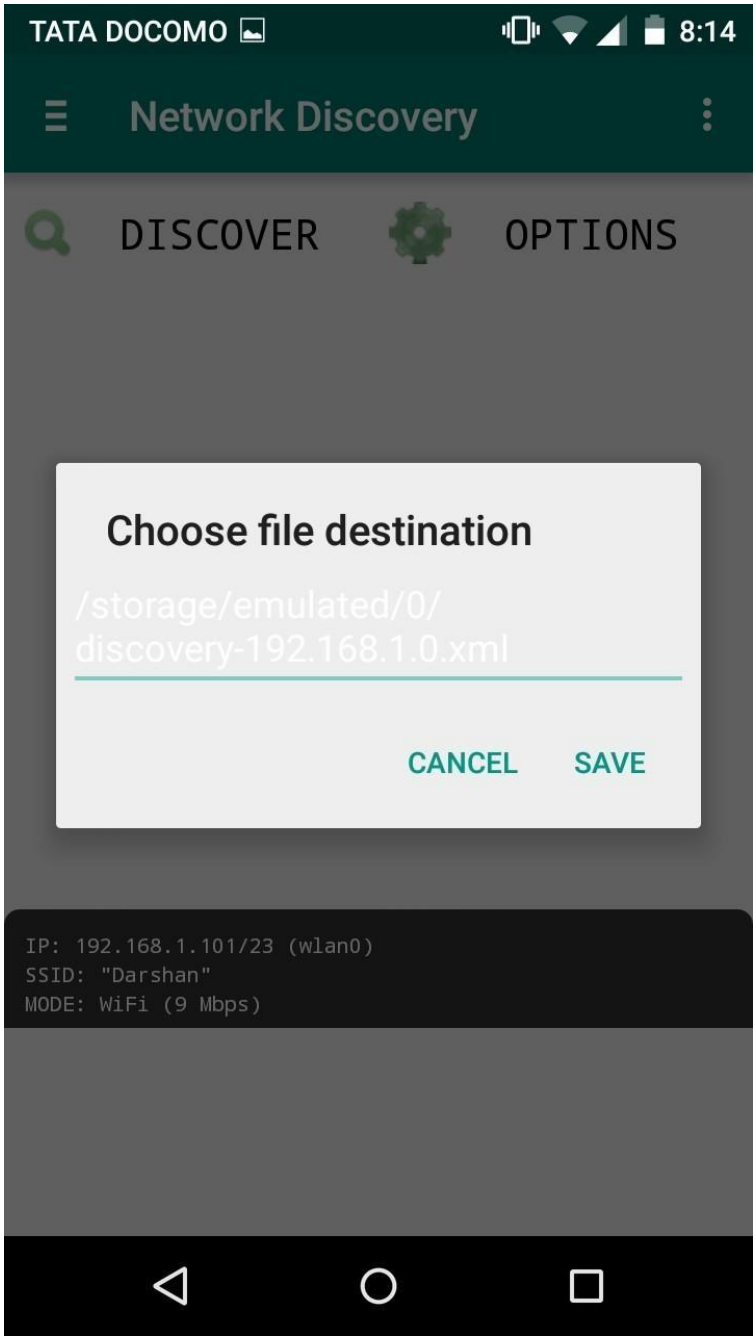
SS-5

- Options in network discovery screen.



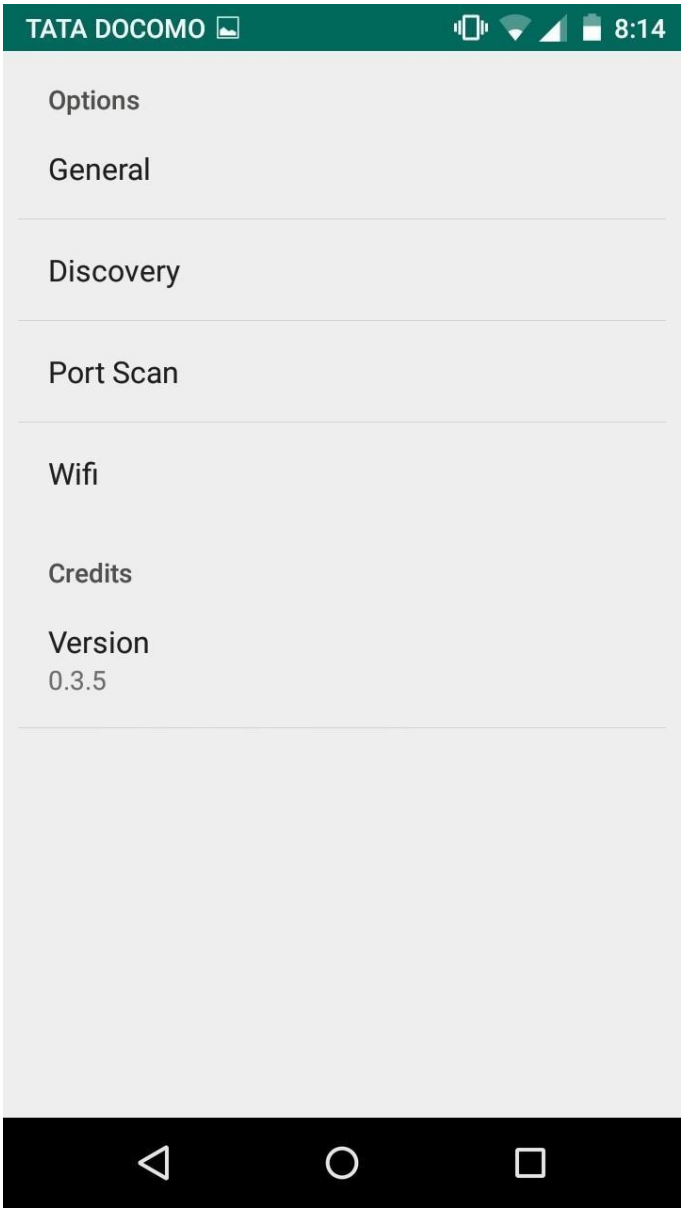
SS-6

- This screen shown how the ip address is scanned.



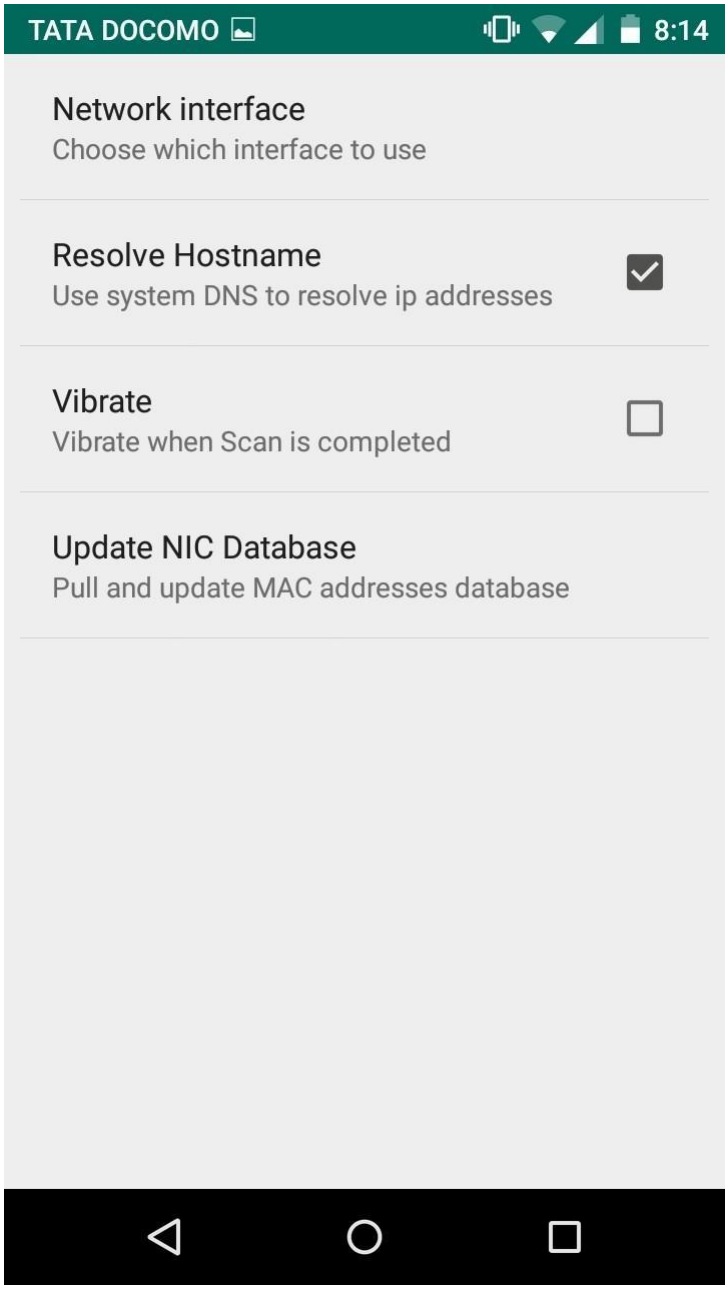
SS-7

- This screen shows how to export the discovered information in file.



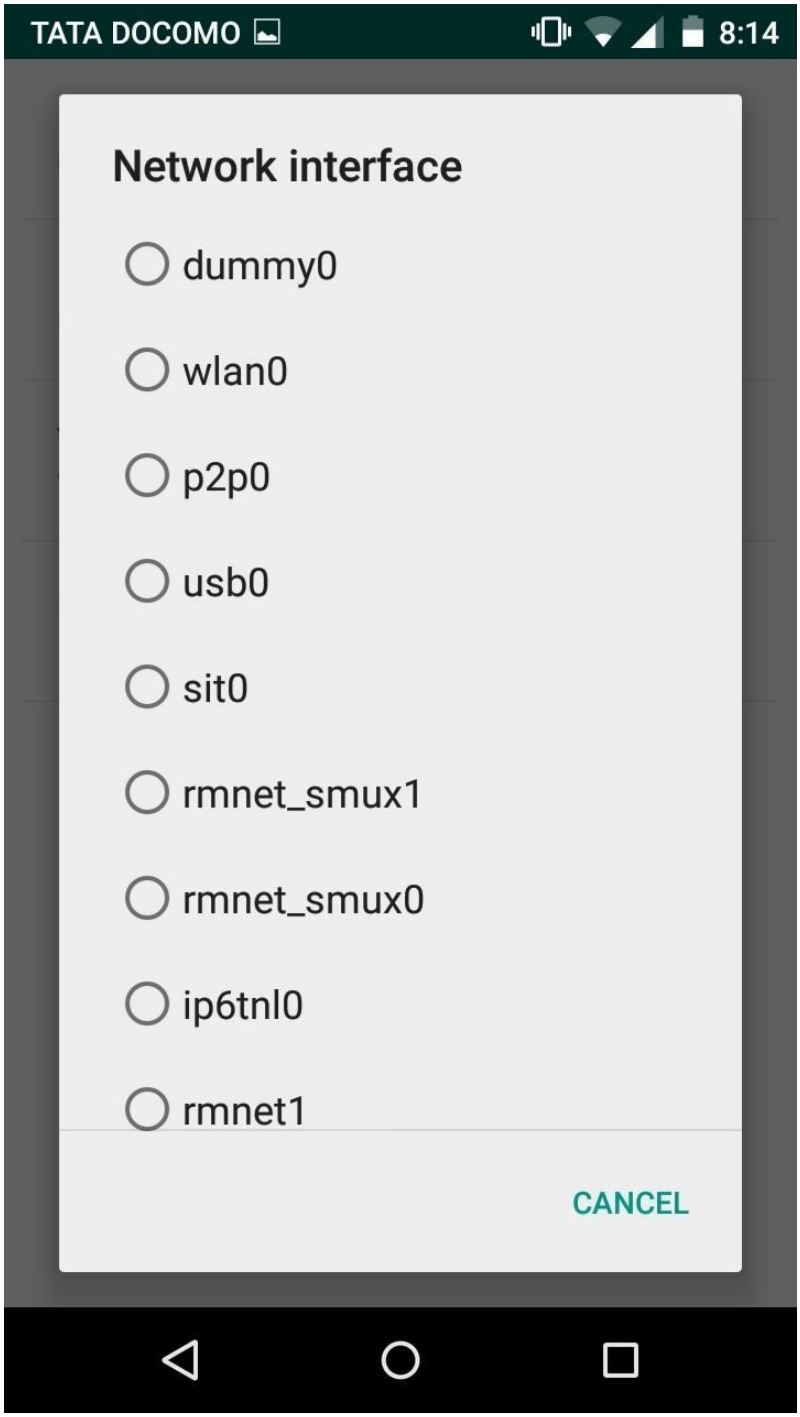
SS-8

- General information about the network discovery function.



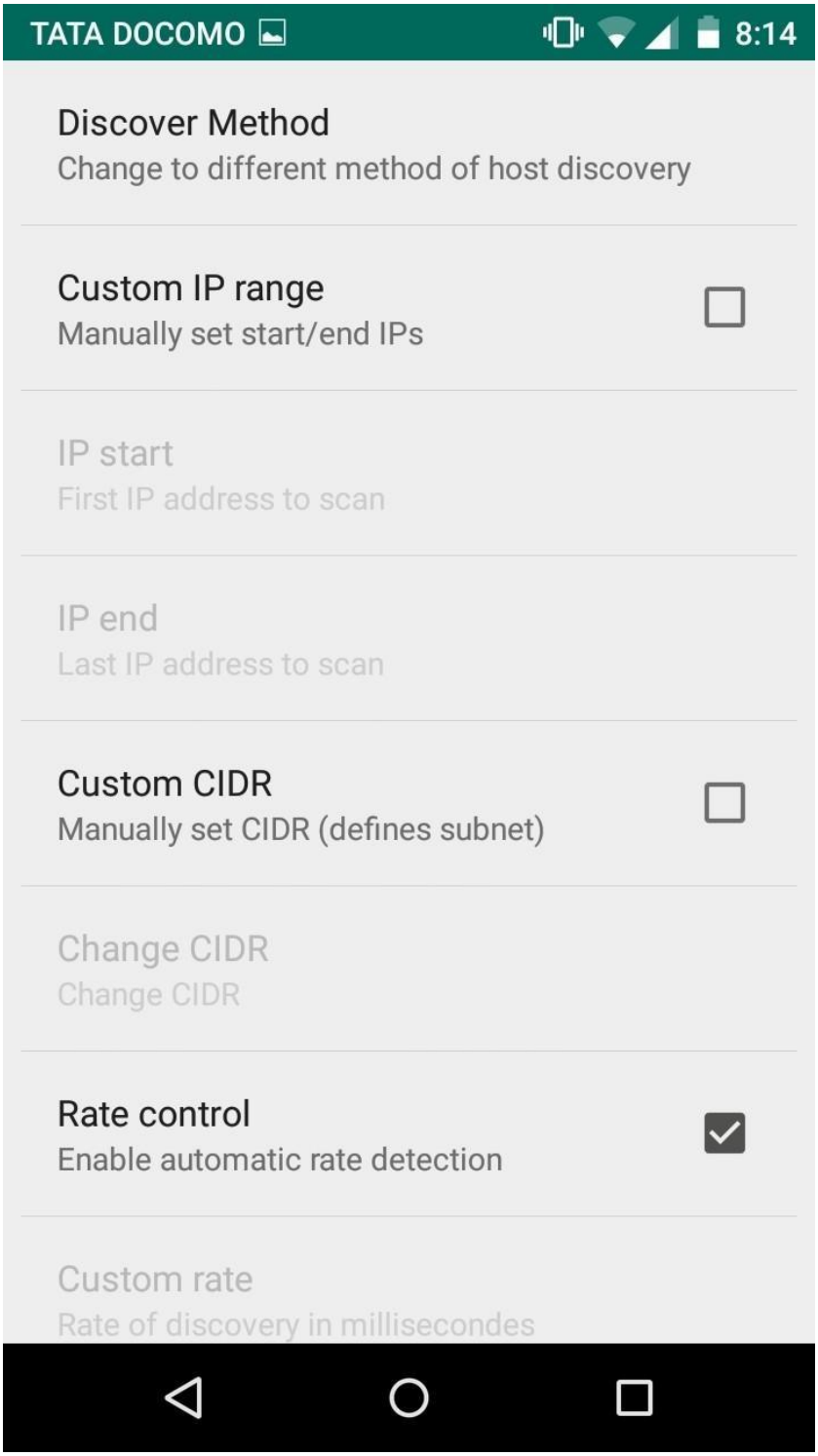
SS-9

- Choosing the network interface.
- Resolve hostname.
- Update NIC database.



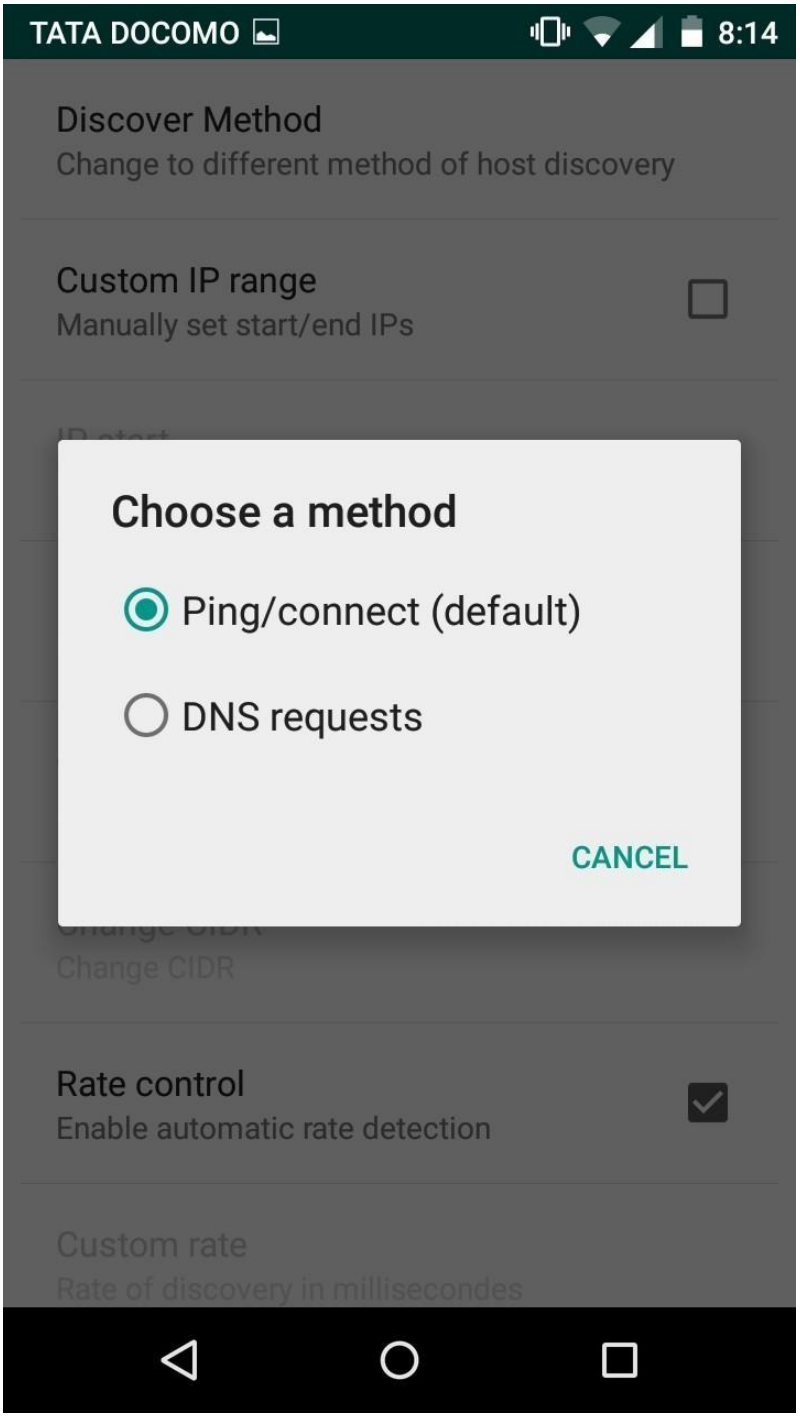
SS-10

- This application shows the list of network interfaces.



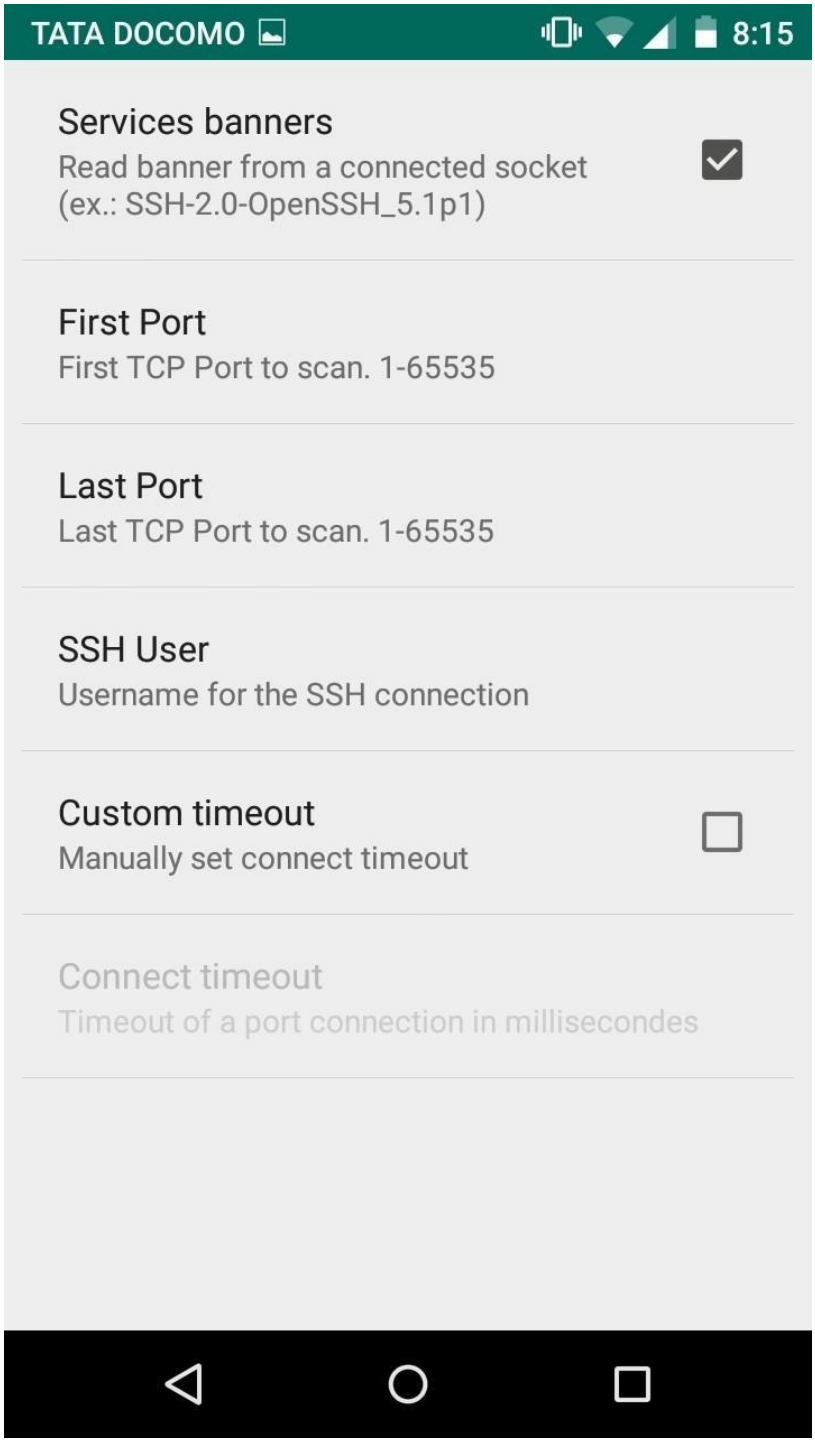
SS-11

- Options available in the network discovery.



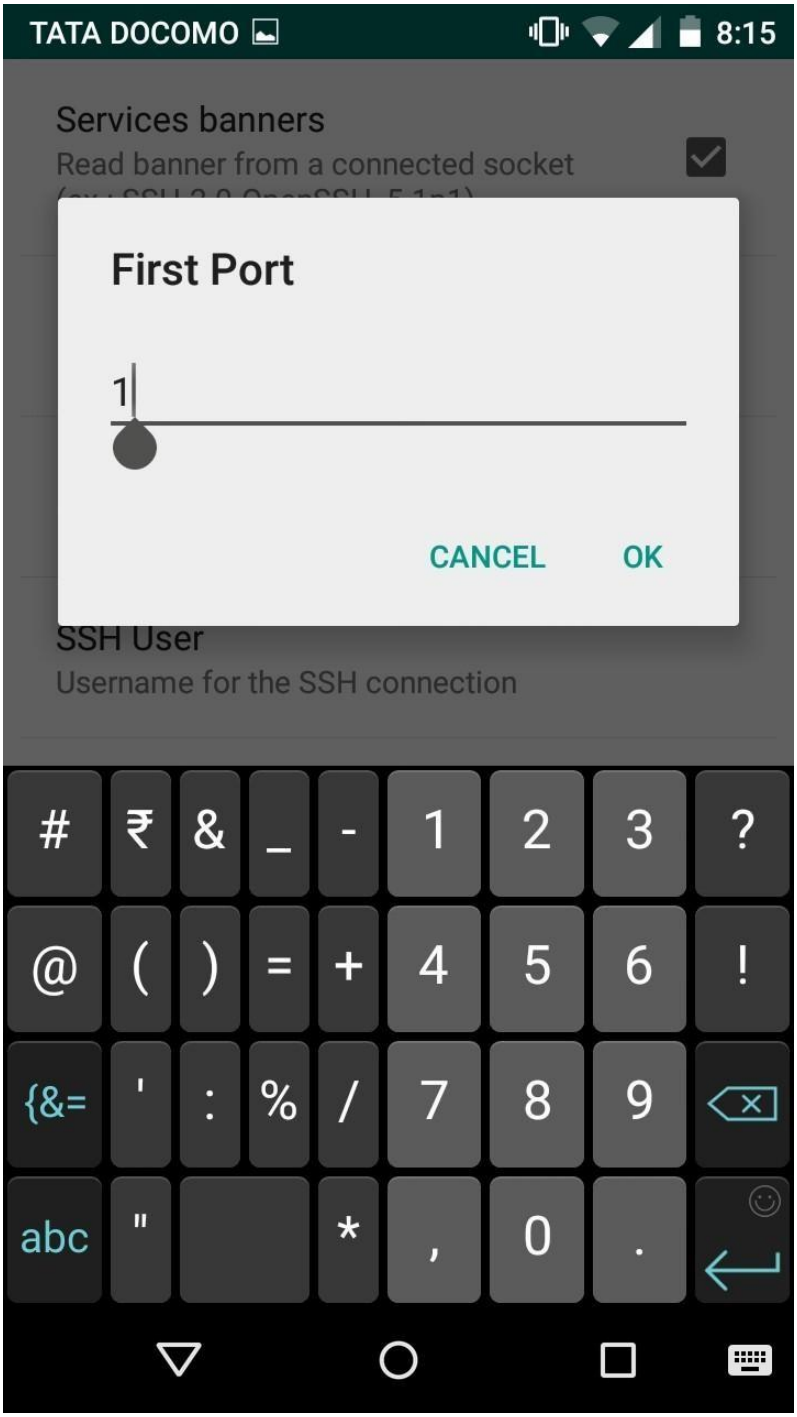
SS-12

- This screen shows about selecting the discovery method.



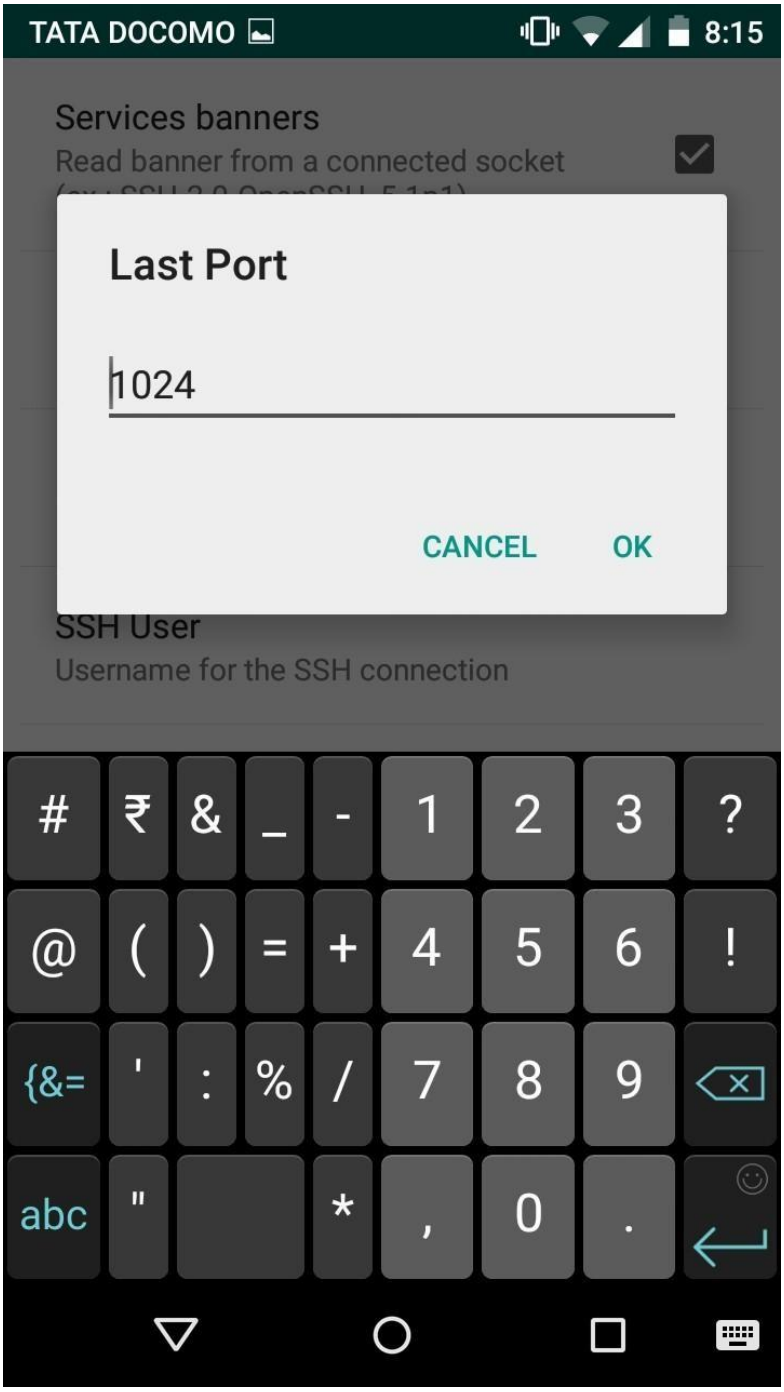
SS-13

- Scanning from range of First and last port manually.



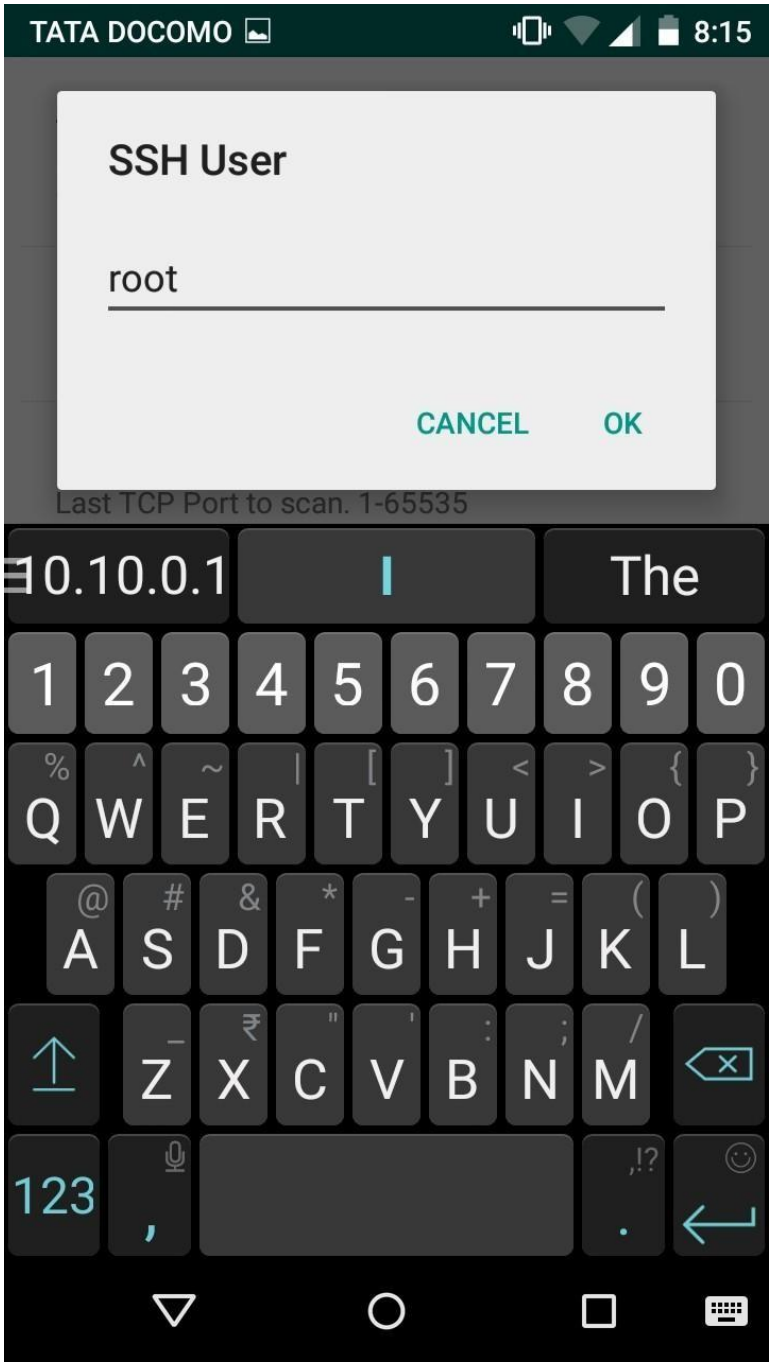
SS-14

- Selection of the first port no from where the scanning is to be started.



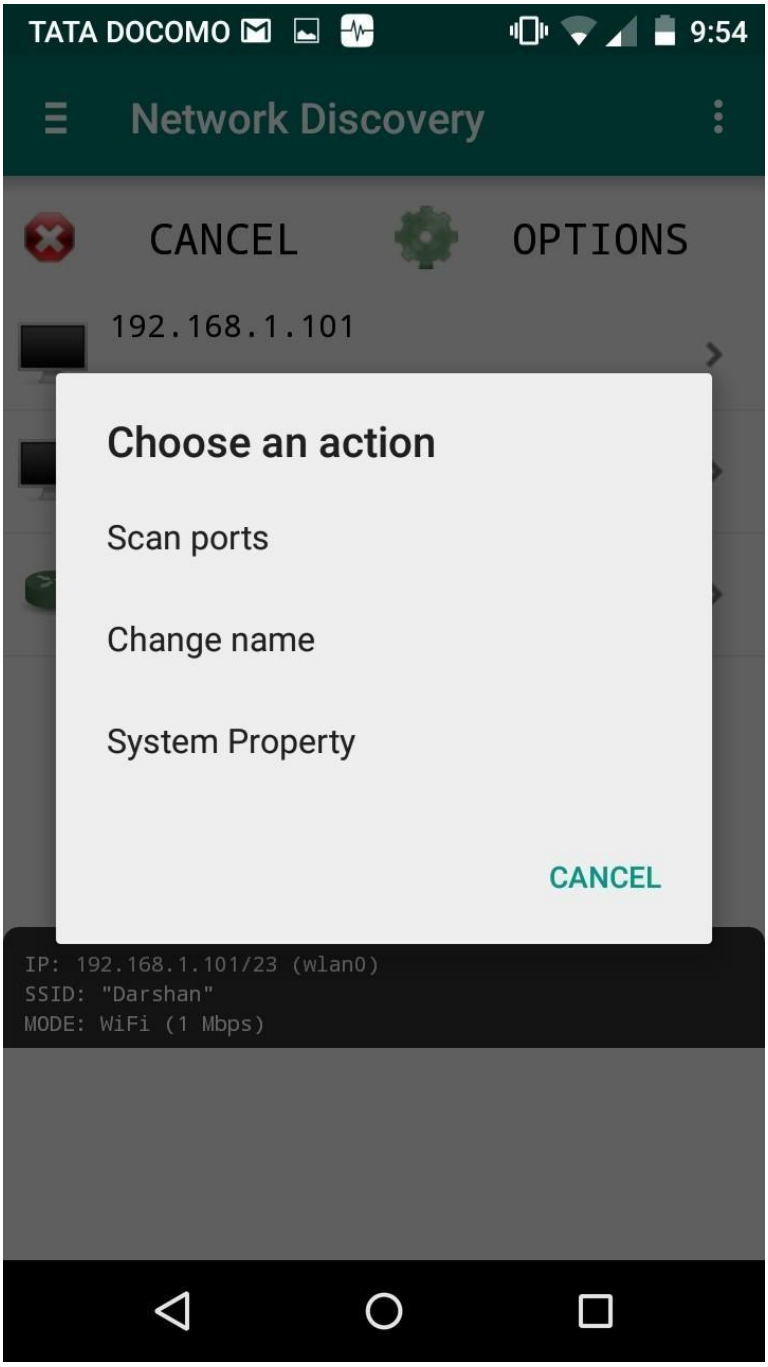
SS-15

- Selection of the last port no from where the scanning is to be ended



SS-16

- Selection of SSH user.



SS-17

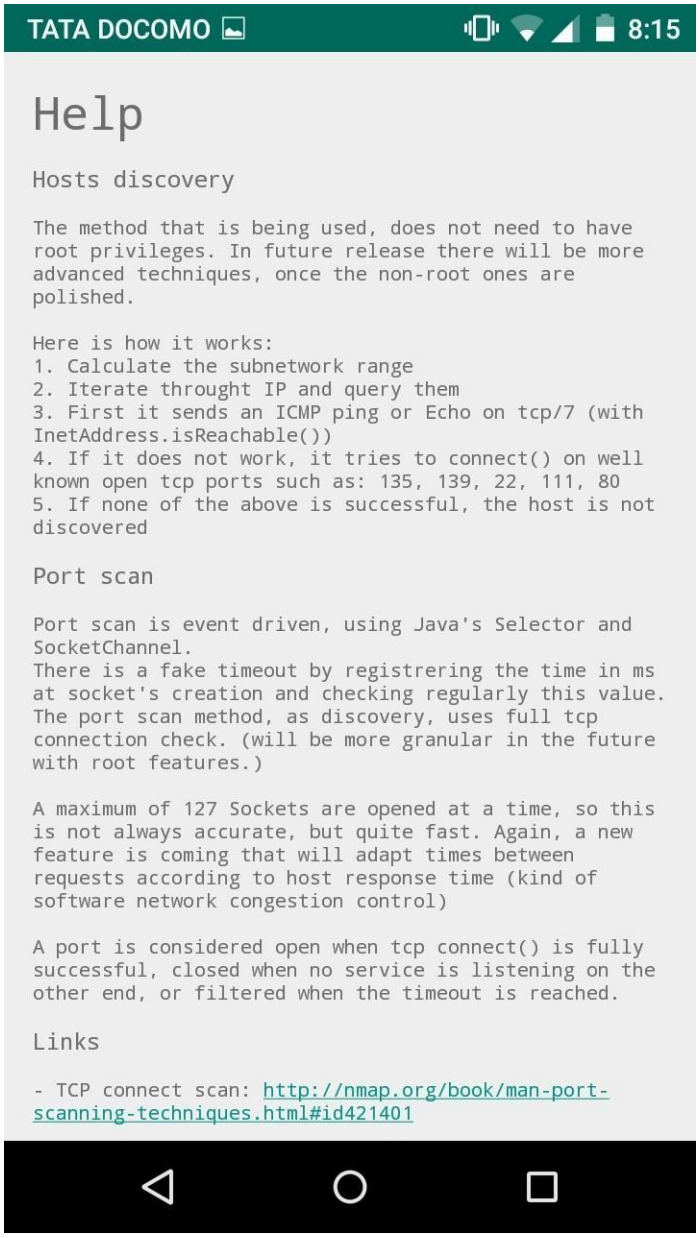
- Performing actions on a specific device.

SS-18

- List of open and close ports.

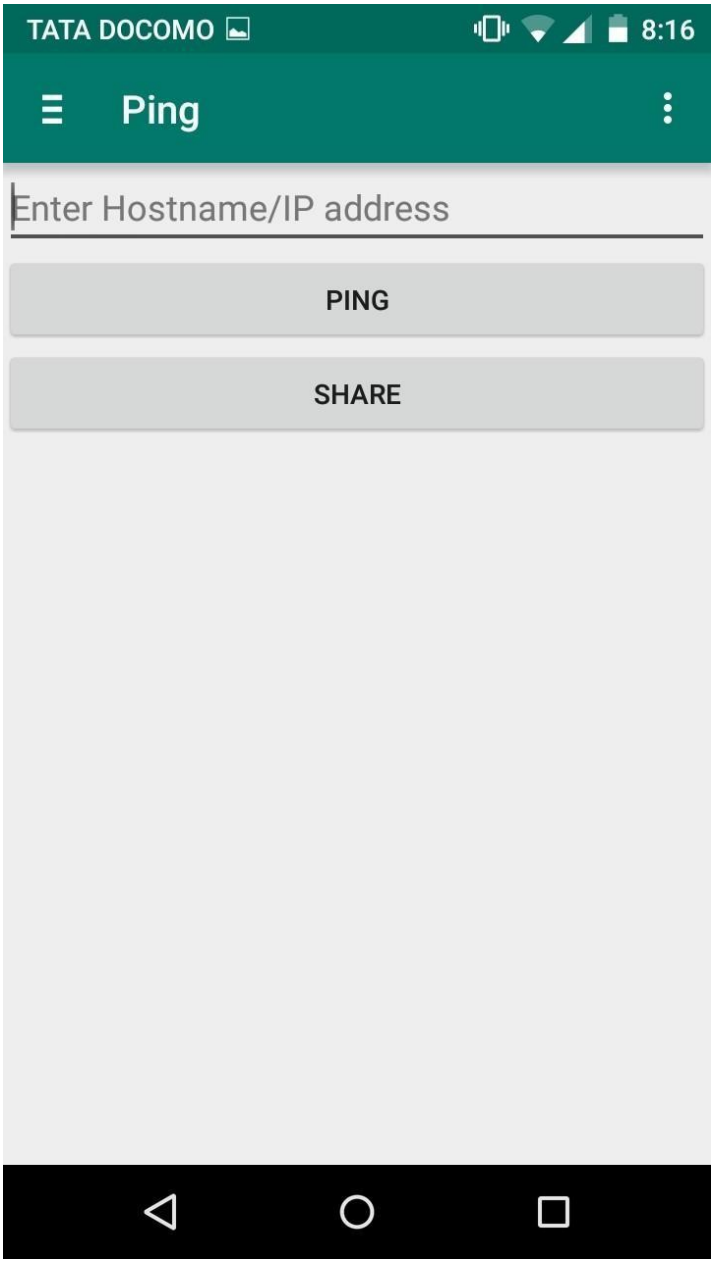
SS-19

- Open ports are shown.



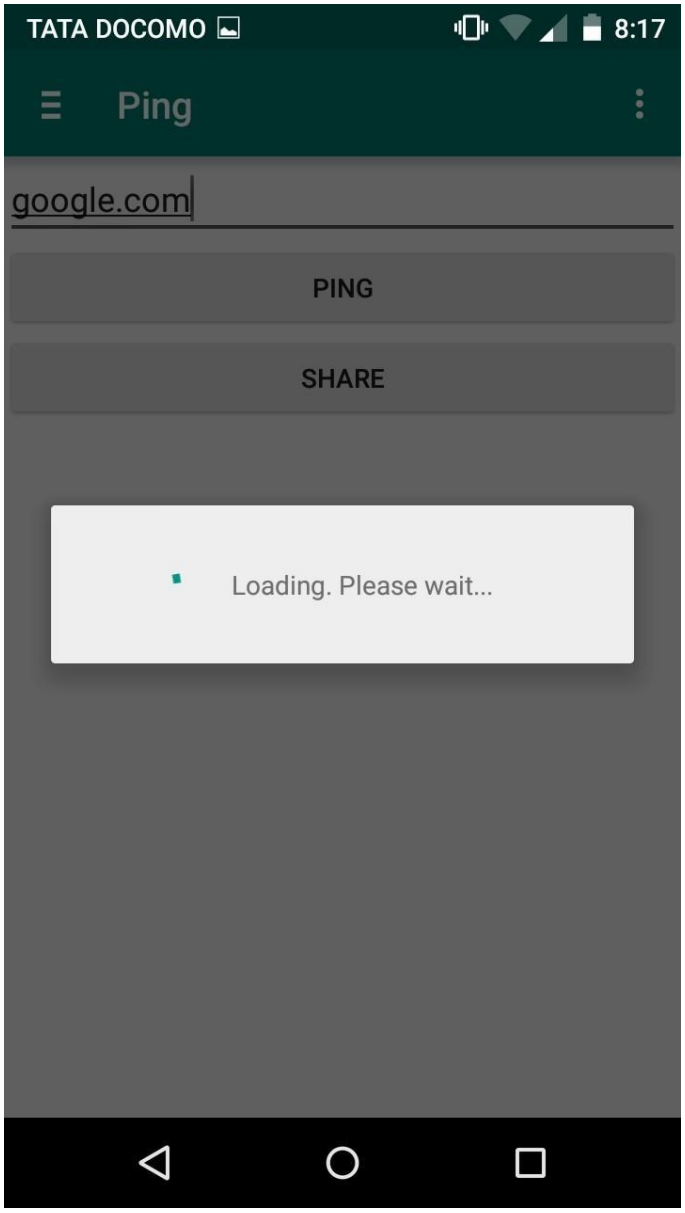
SS-20

- This screen shows help for operating network discovery and port scan.



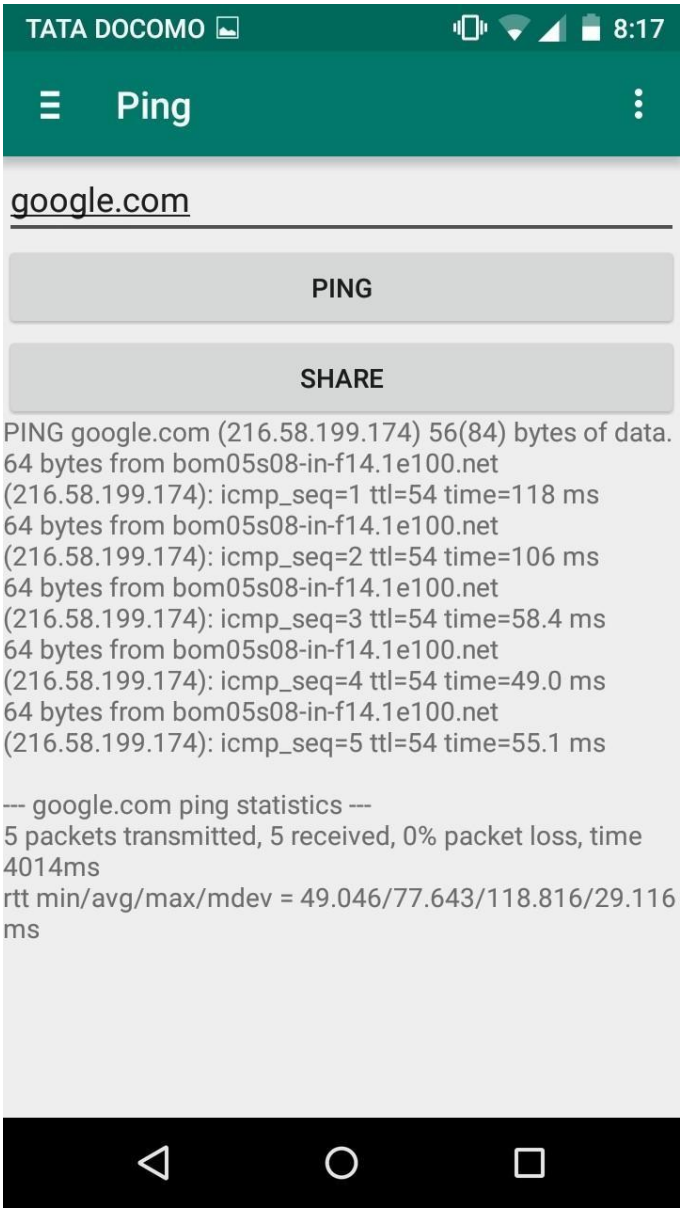
SS-21

- Ping functionality is used to check whether the server is accessible or not.



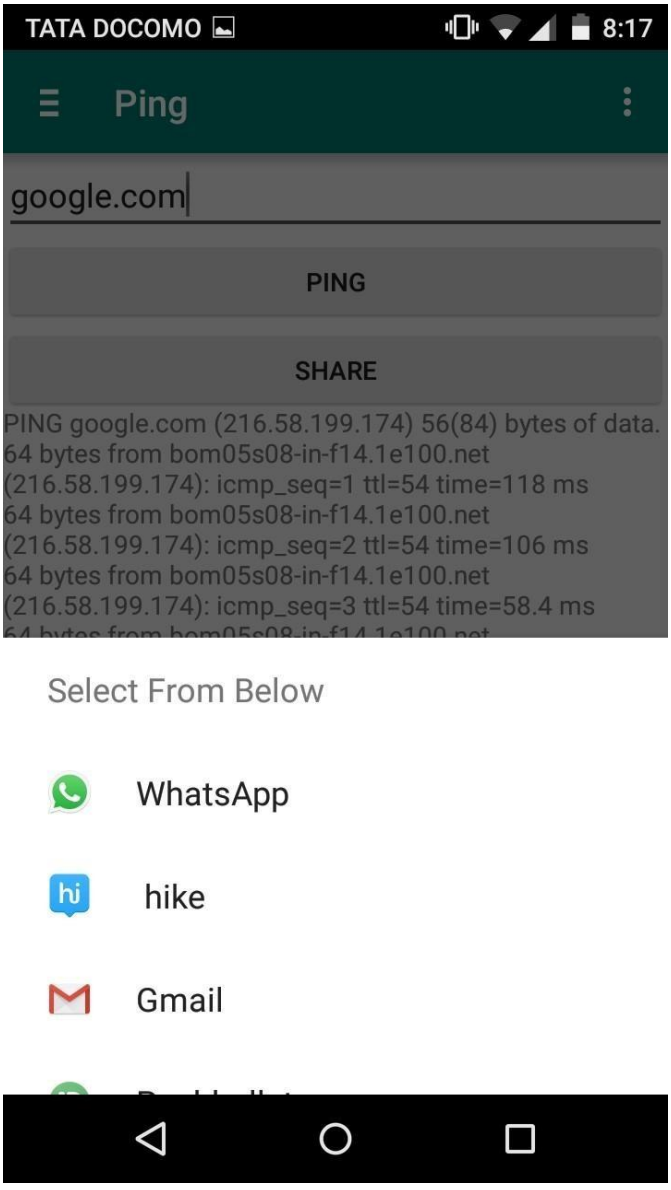
SS-22

- After entering the hostname/ip address, user clicks on the Ping button.
- After clicking Ping button,the above dialogbox appears.



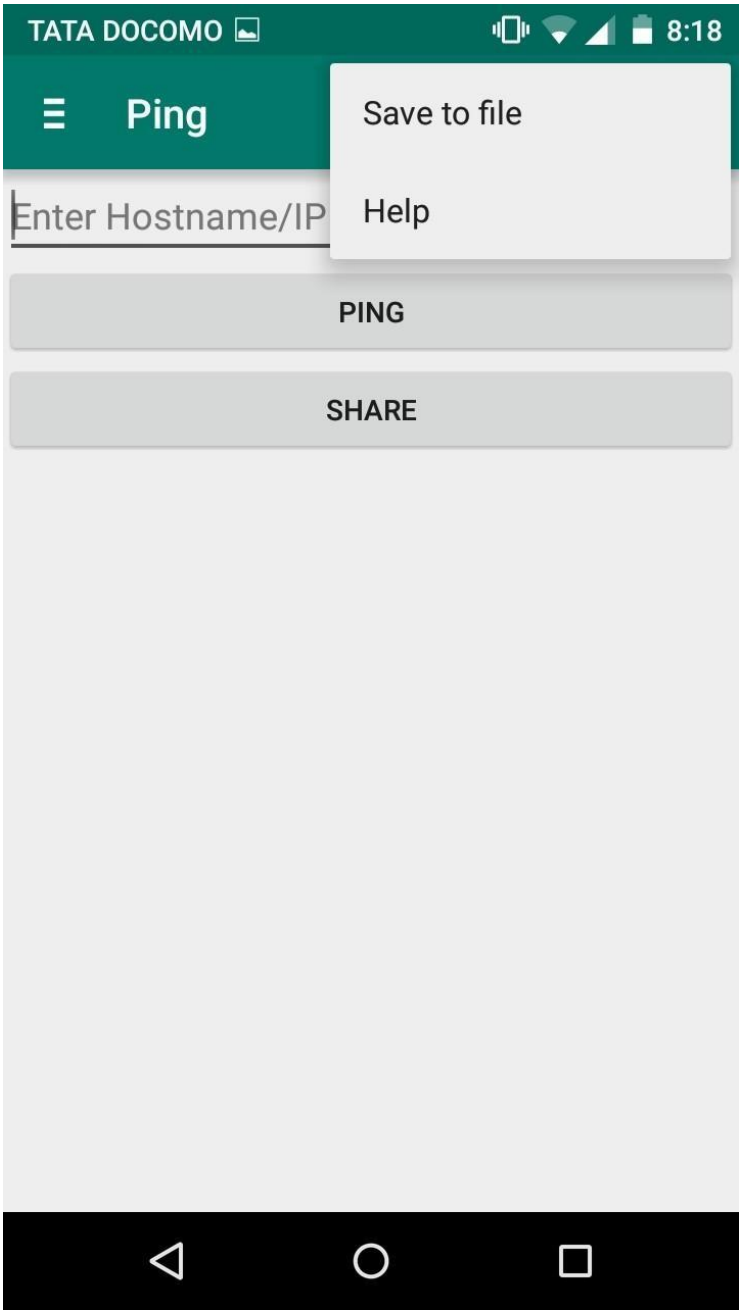
SS-23

- This screen shows Ping statistics.



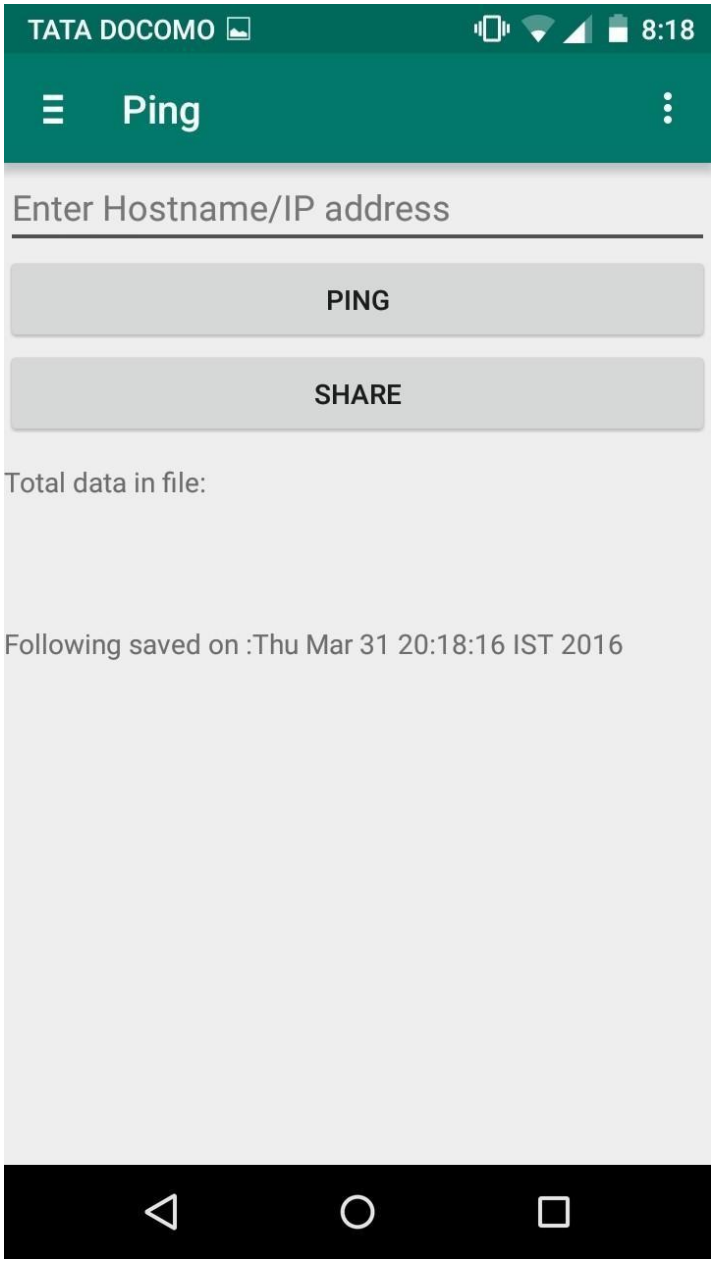
SS-24

- User can share the information of ping statistics by using facebook,gmail,twitter,hike etc.



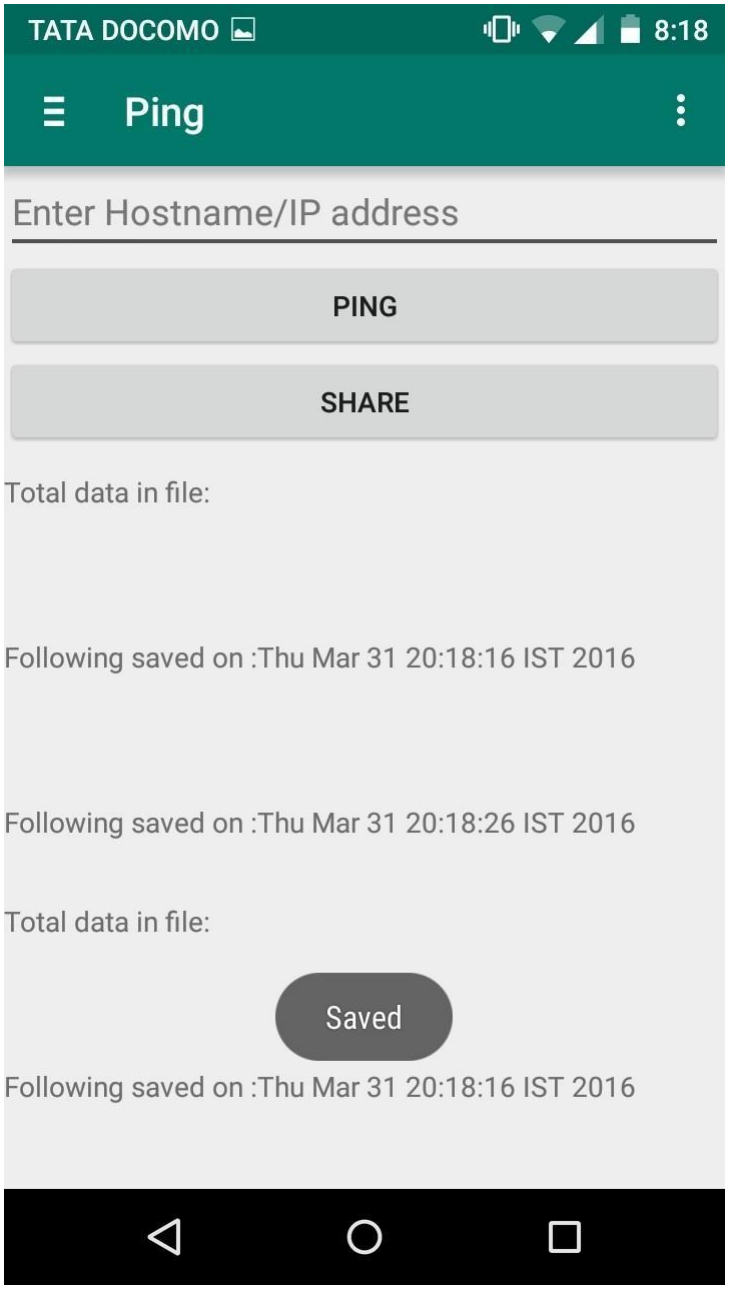
SS-25

- User can also save this information to a txt file.



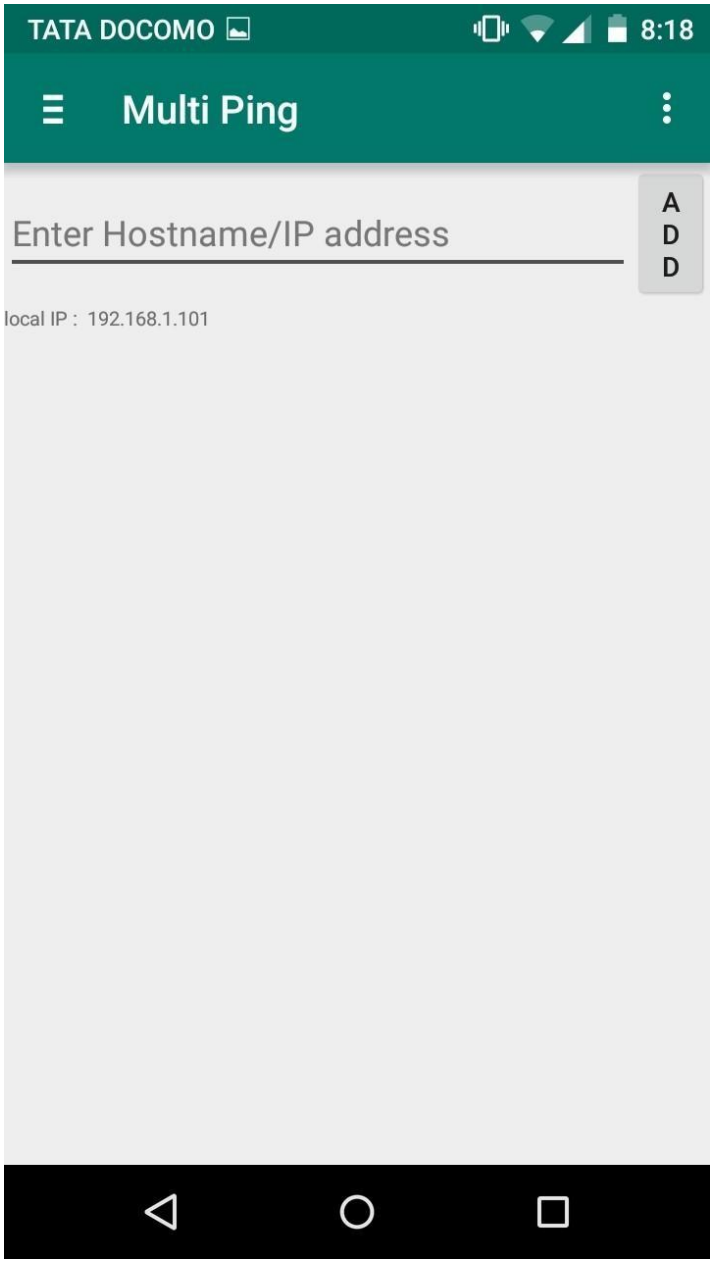
SS-26

- The above screen shows notification after saving the information to the file.



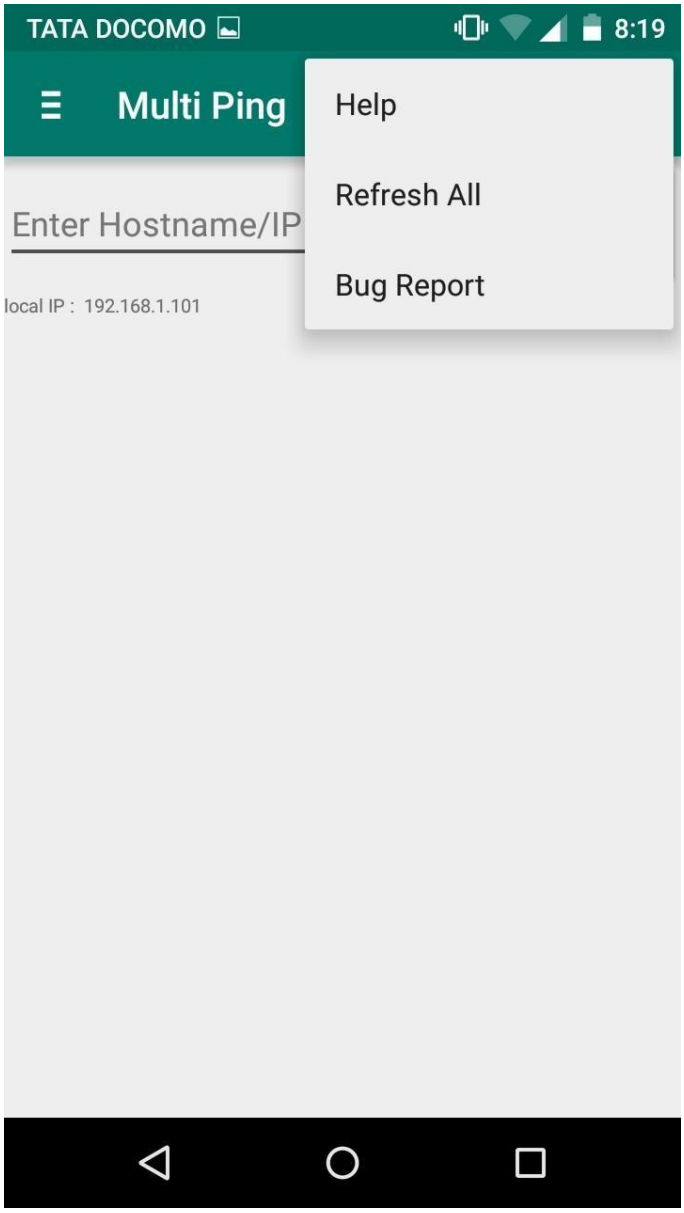
SS-27

- Toast of “Saved” for saving information to the file.



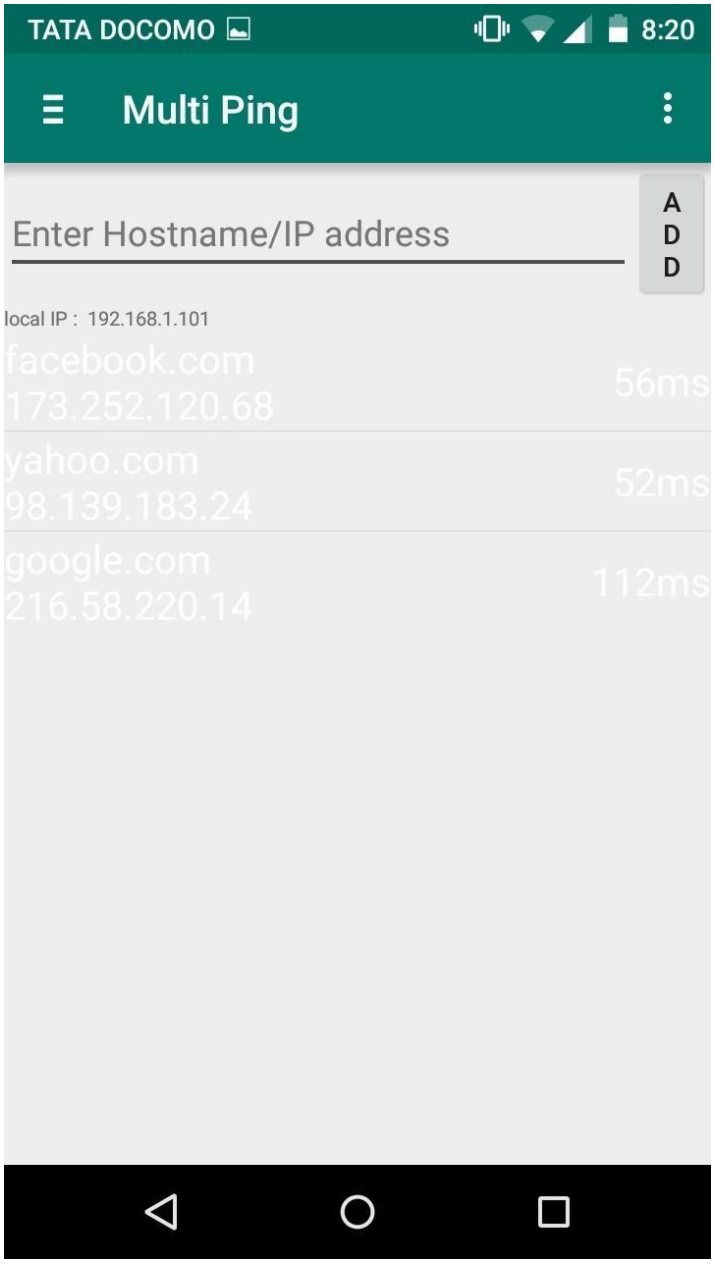
SS-28

- In Multi ping functionality is we can check accessibility of more than one server at a time. User can add or delete the host name in this functionality.



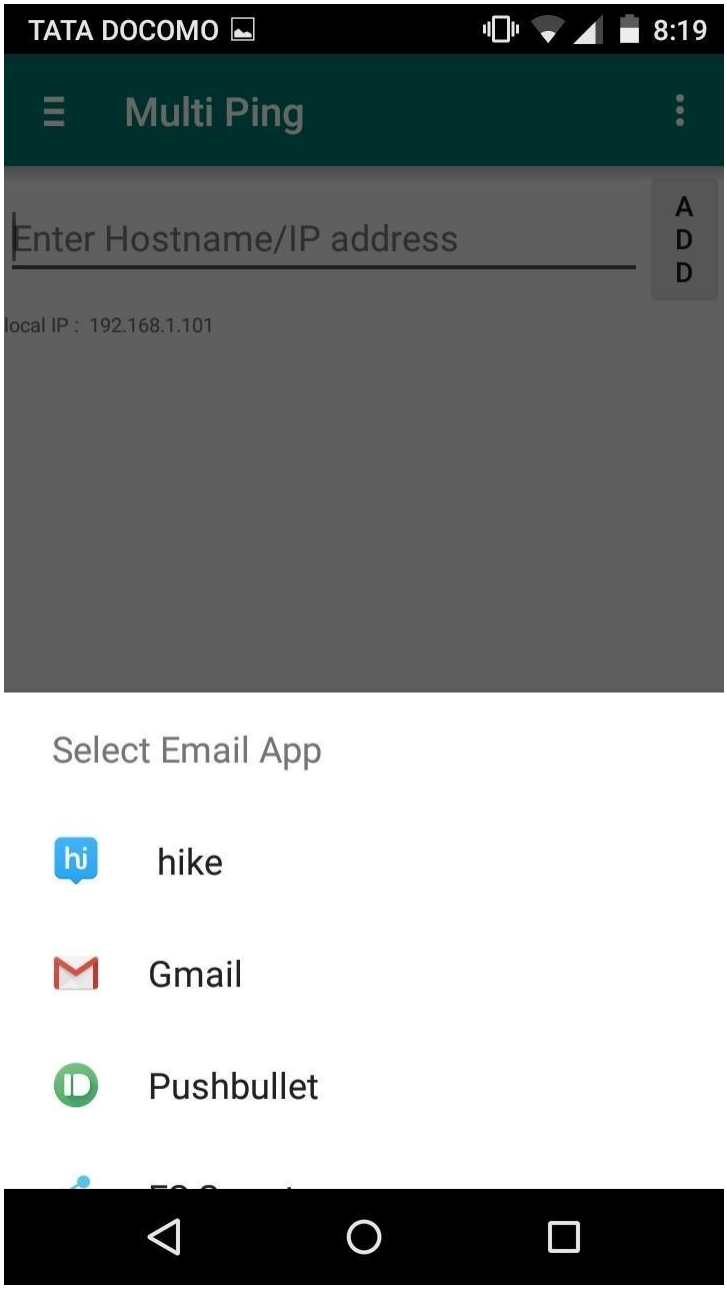
SS-29

- Help, refresh all and bug report options.



SS-30

- This screen shows the respective times to access multiple servers at the same time using MultiPing functionality.

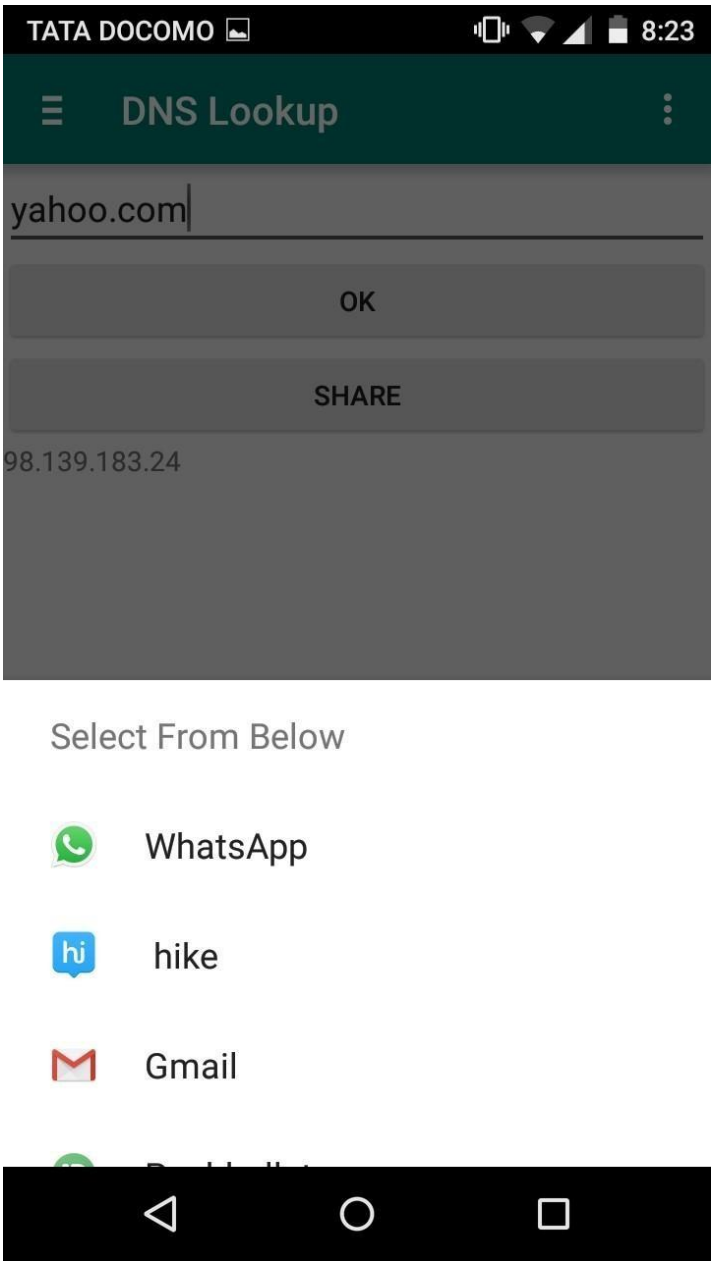


SS-31

- User can share the information of by using facebook,gmail,twitter,hike etc.

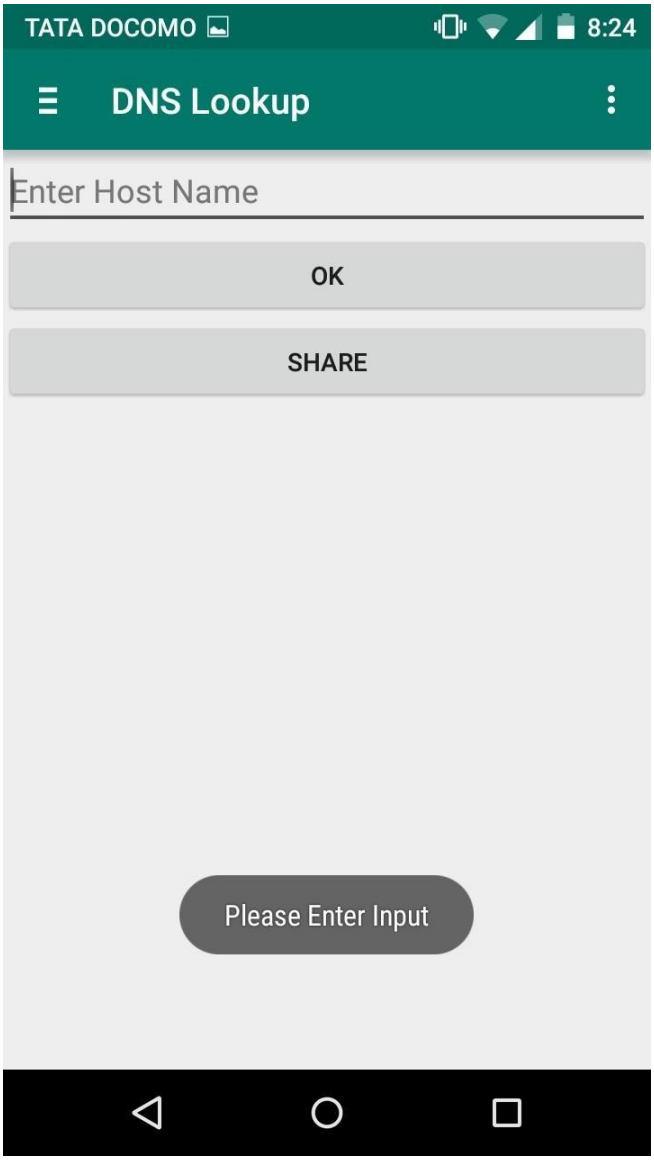
SS-32

- DNS lookup functionality is used to check the ip address of the given input hostname.



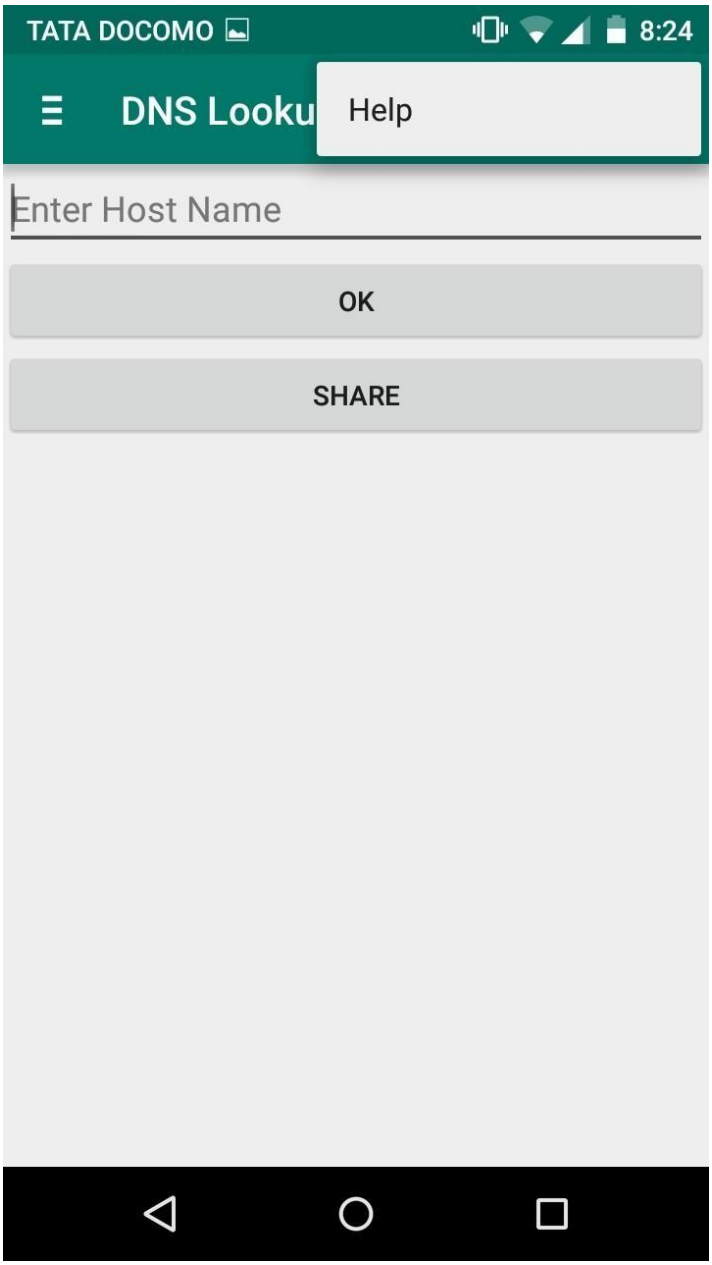
SS-33

- User can share the information of by using facebook,gmail,twitter,hike etc.



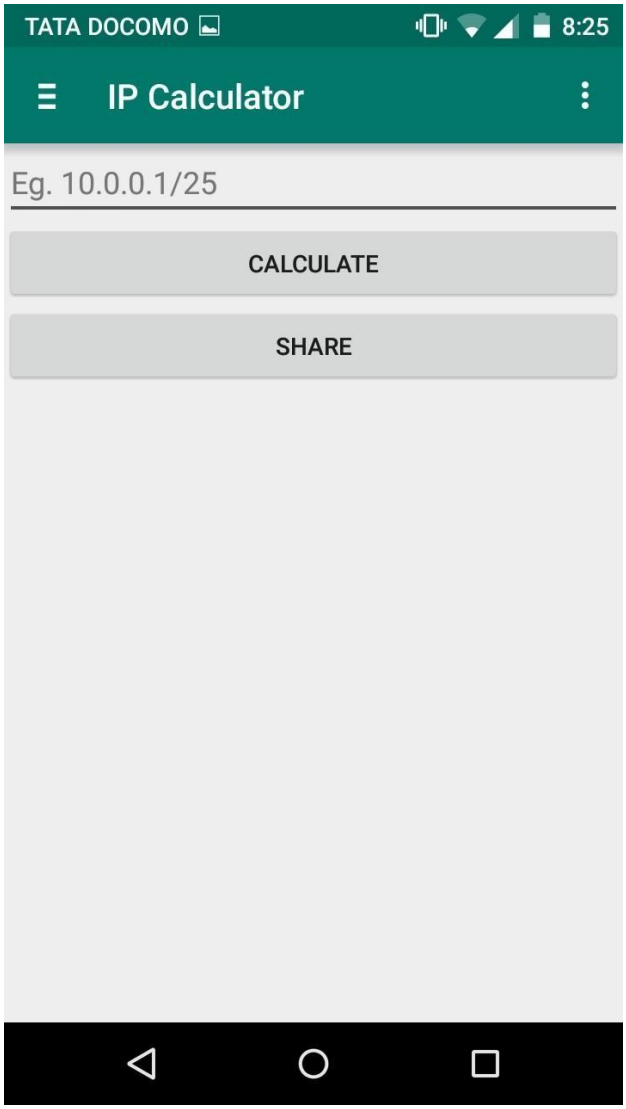
SS-34

- If the OK button is clicked without giving any input then,the toast appears that “Please Enter Input”.



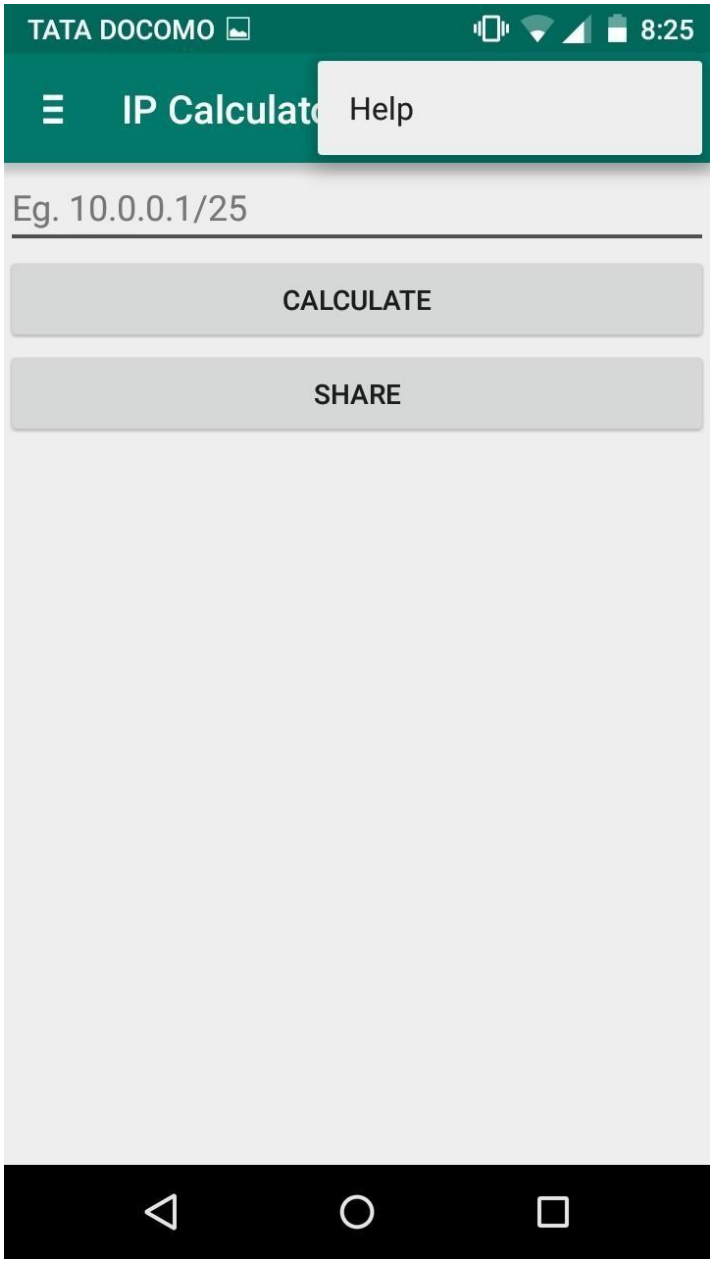
SS-35

- Help option for DNS lookup.



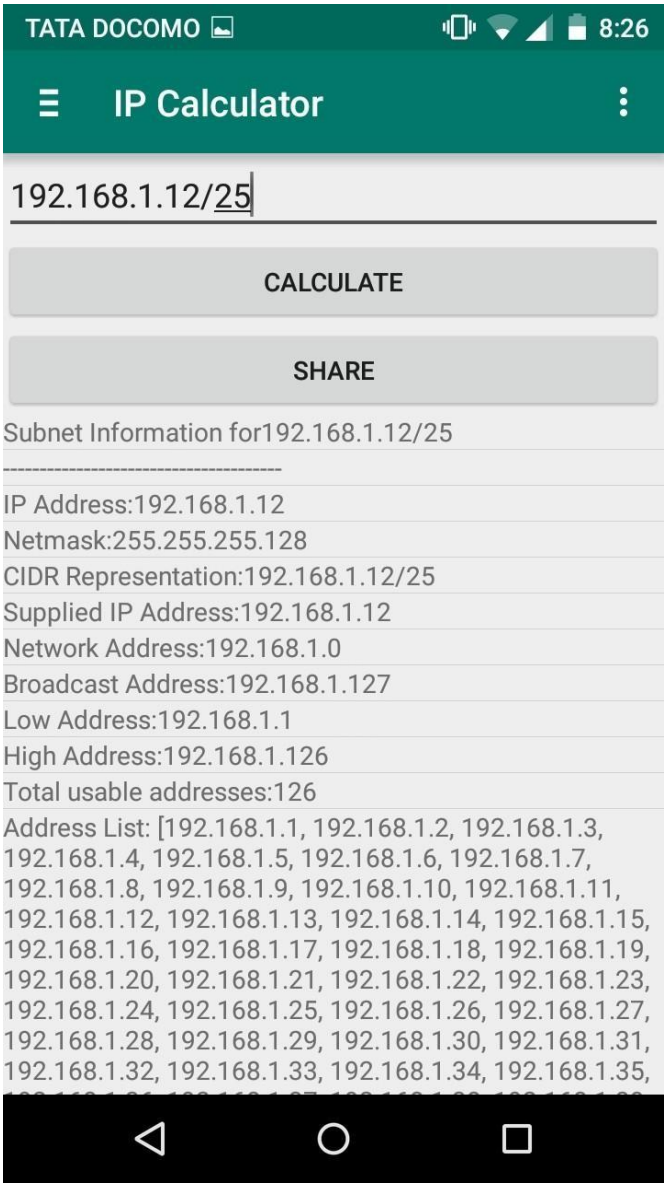
SS-36

- IP Calculator functionality stands for the calculations of subnet mask,Network range,High and Low Address of the range .
- In this functionality user needs to input the IP address in the form of CIDR representation.



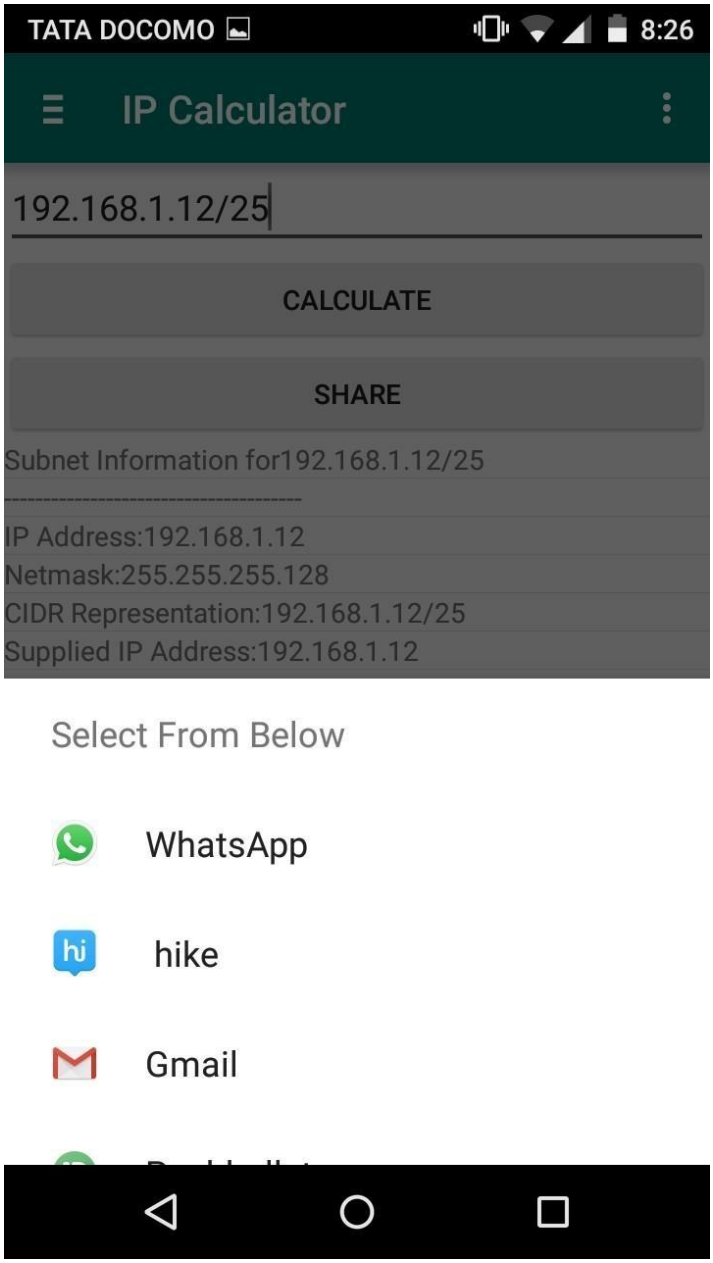
SS-37

- Help option for IP calculator.



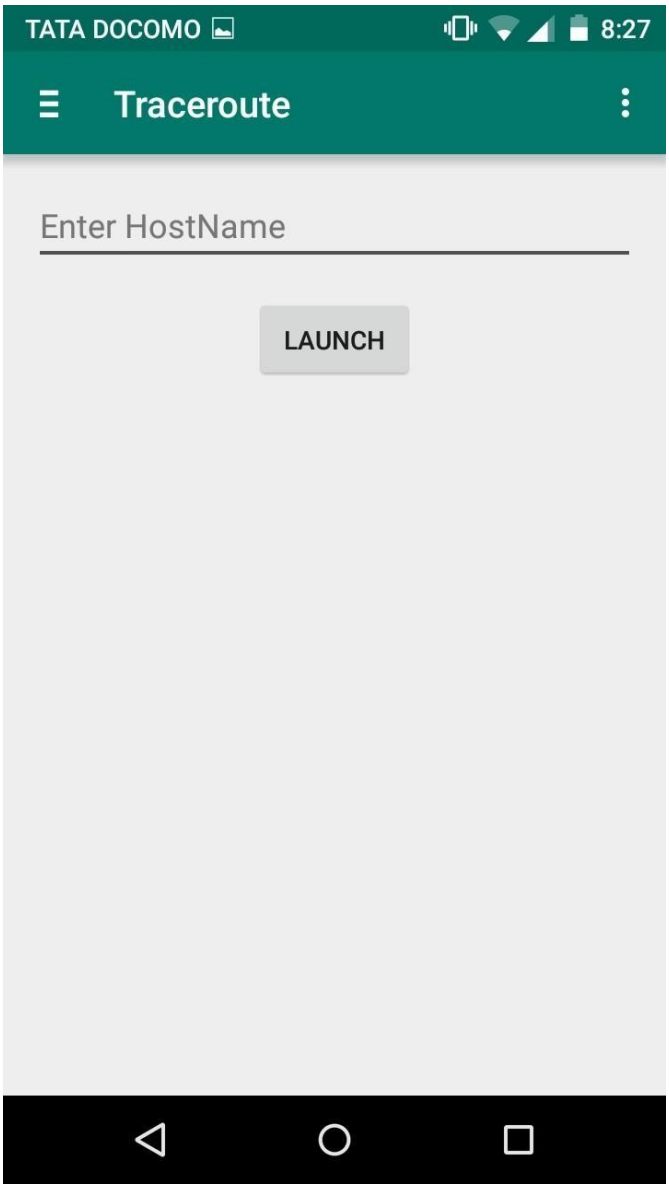
SS-38

- This screen shows the output of IP calculator functionality after giving input IP address using CIDR notation.



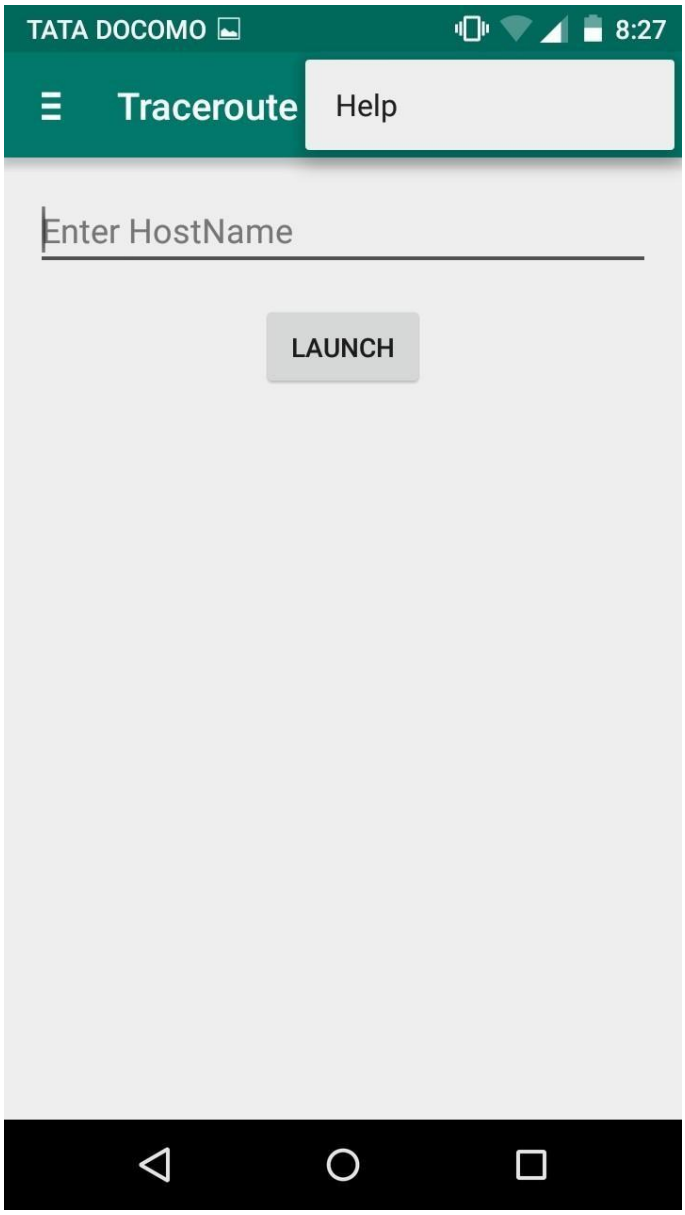
SS-39

- User can share the information by using facebook,gmail,twitter,hike etc.



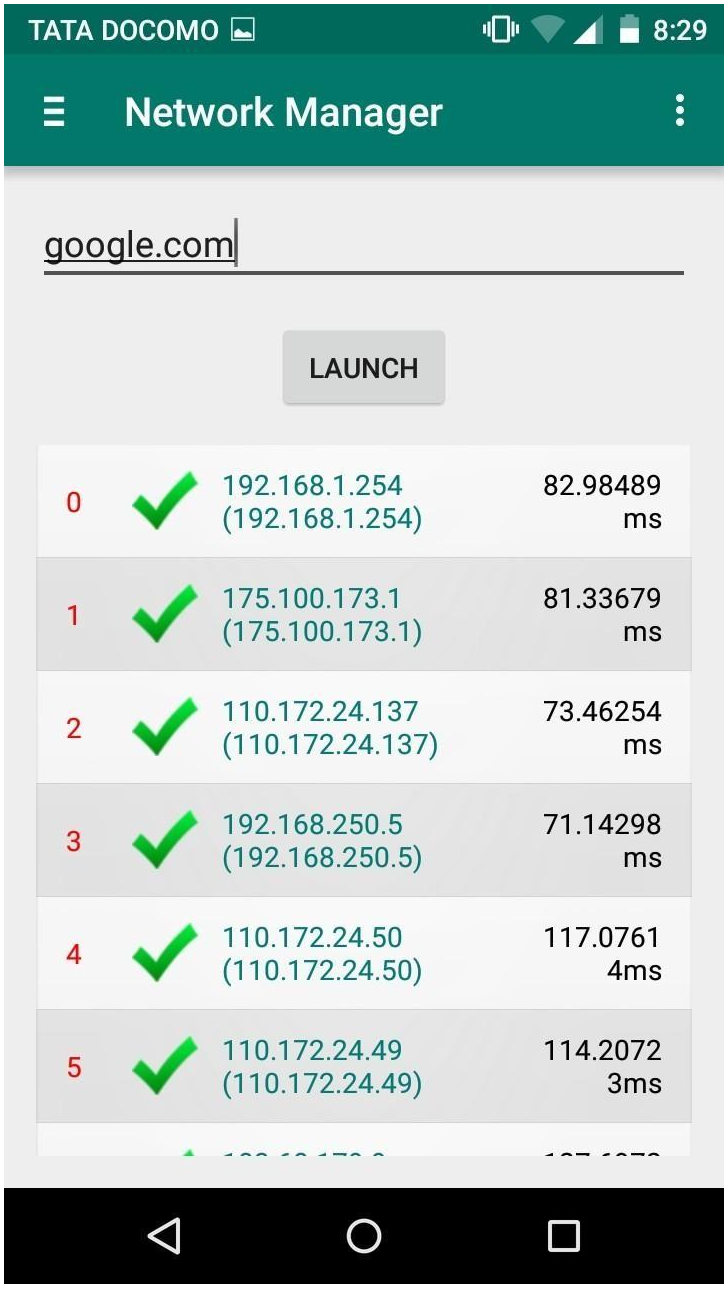
SS-40

- Traceroute functionality is used to determine the route to the given host name via different hops.
- User needs to give host name as an input and in return he will get the number of hops through which the packet has been passed. If we give 'www.goggle.com' as an input than traceroute functionality will give the hops with the IP address so user can determine the whole route of the packet.



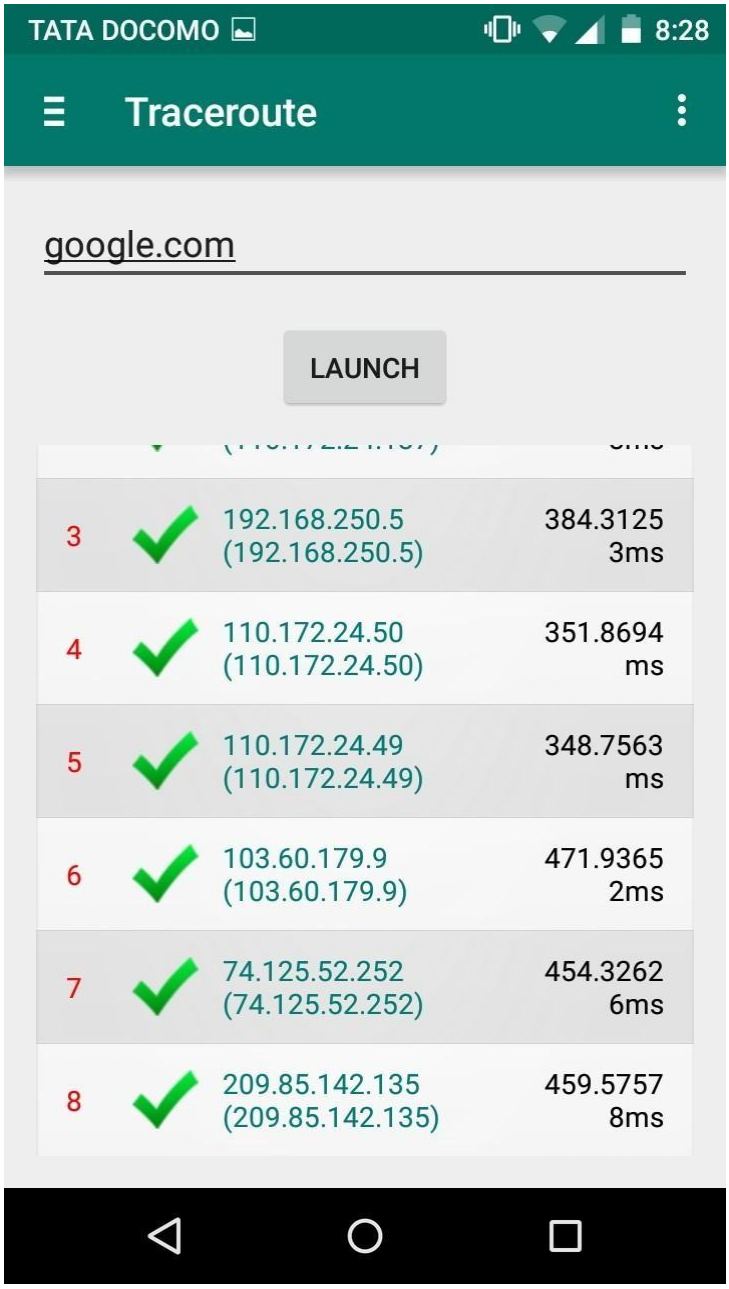
SS-41

- Help for traceroute.



SS-42

- This screen displays the hops and respective time for the packet to travel through each hop after giving hostname as the input.



SS-43

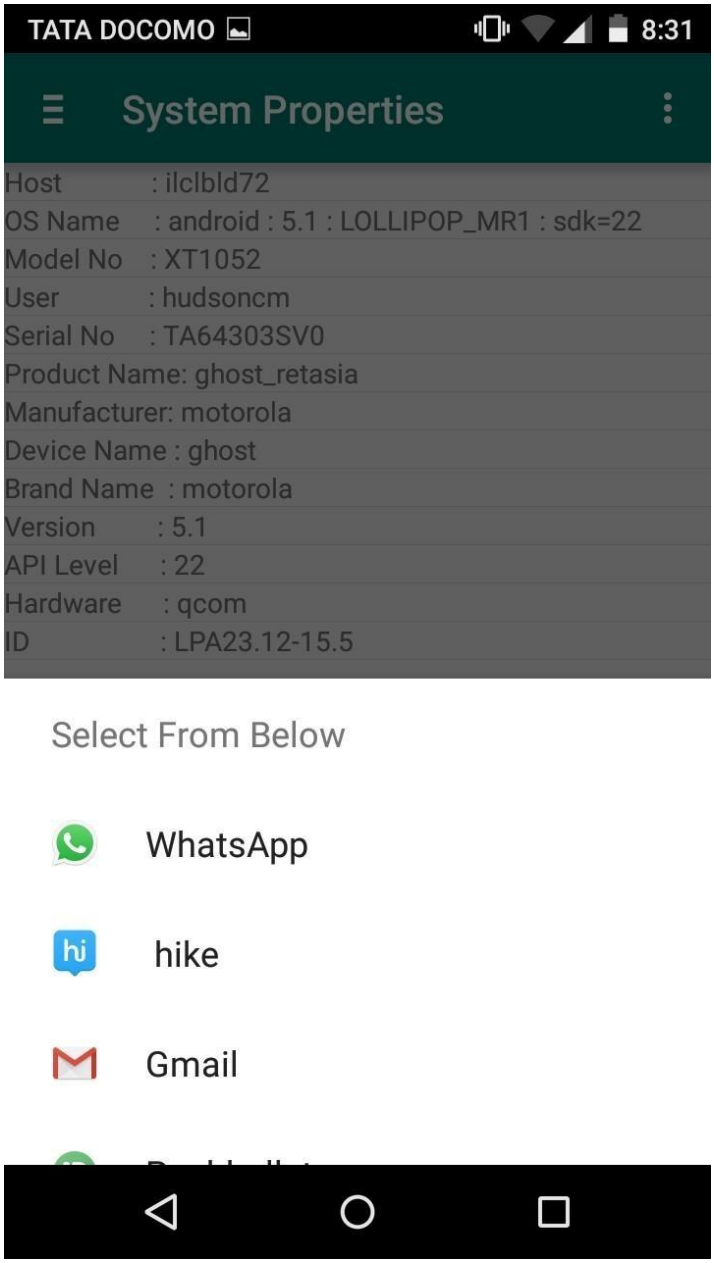
- Maximum hopes upto which destination is received are listed.

SS-44

- System properties of the localhost.

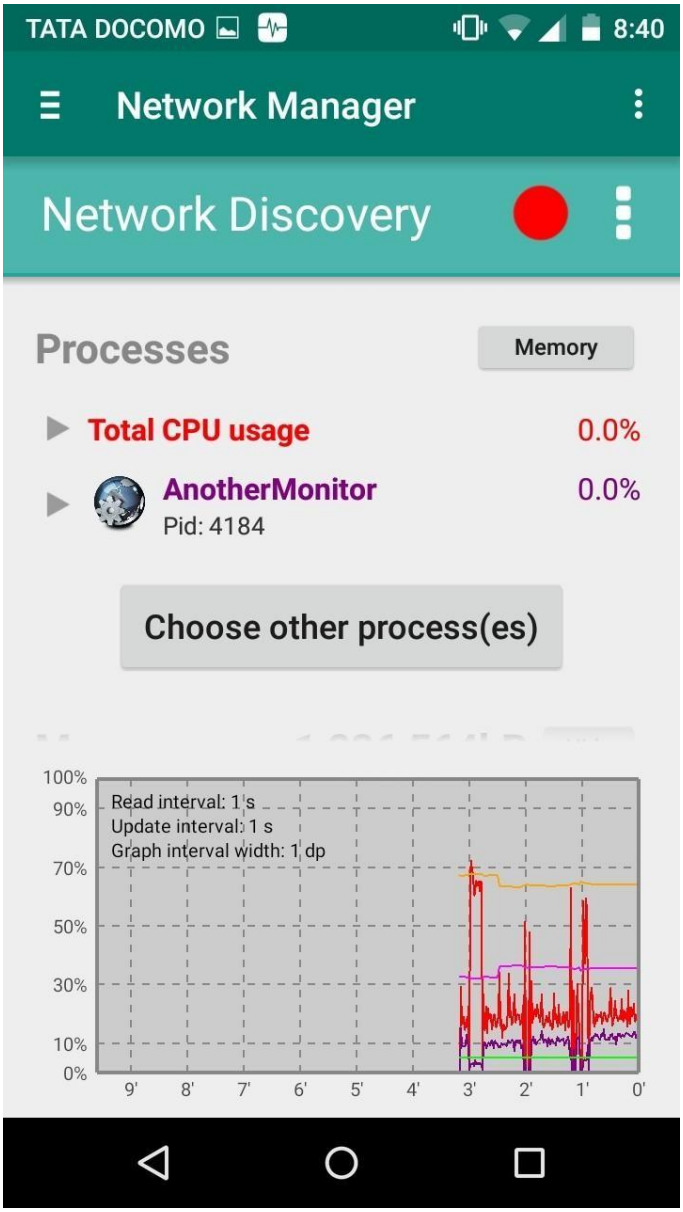
SS-45

- Help for system property.



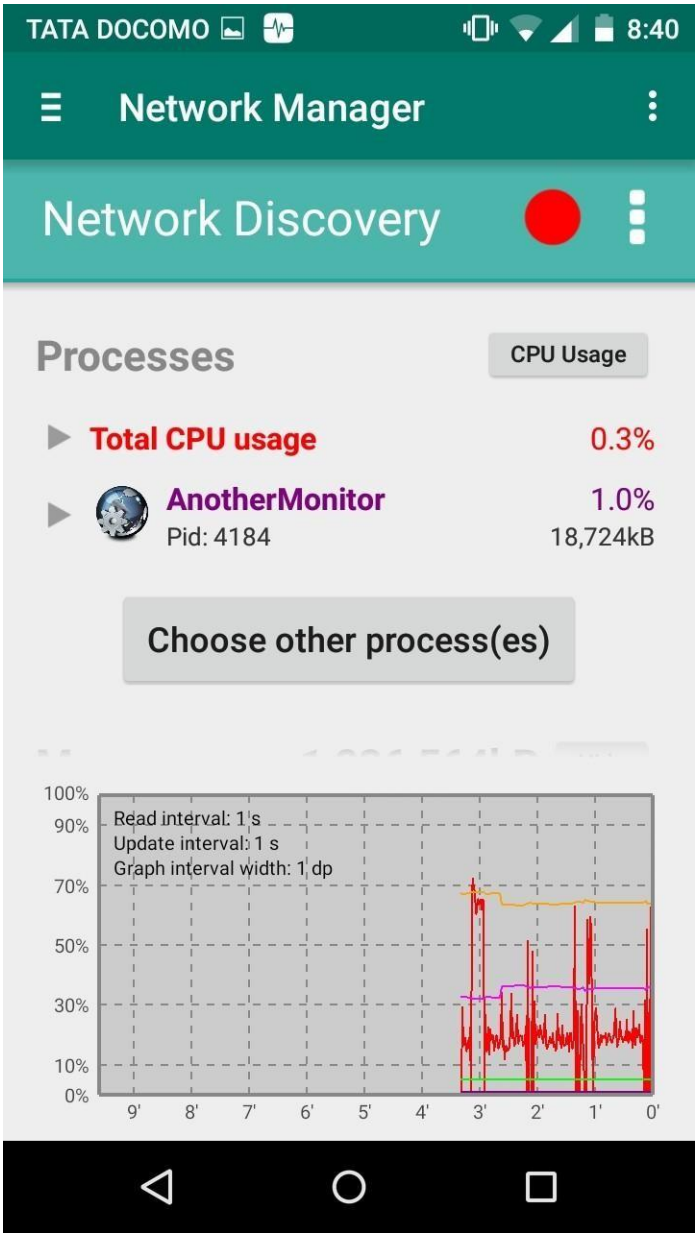
SS-46

- Share information using facebook,twitter,gmail,hike etc.



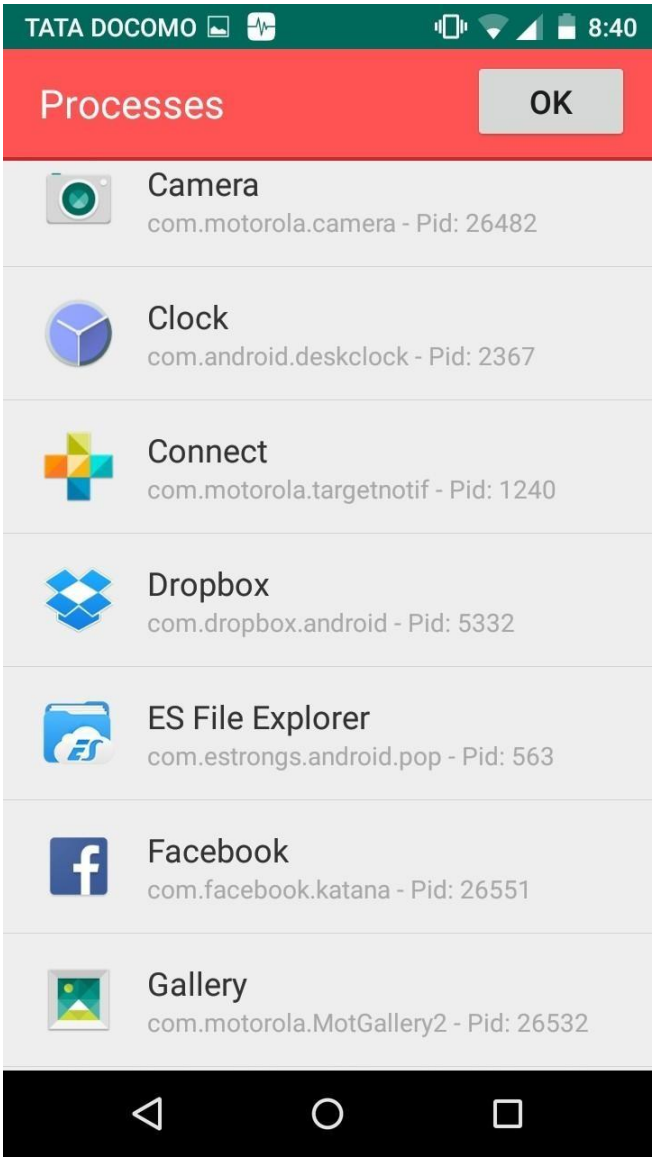
SS-47

- This screen shows CPU/Memory performance and the graph representation.



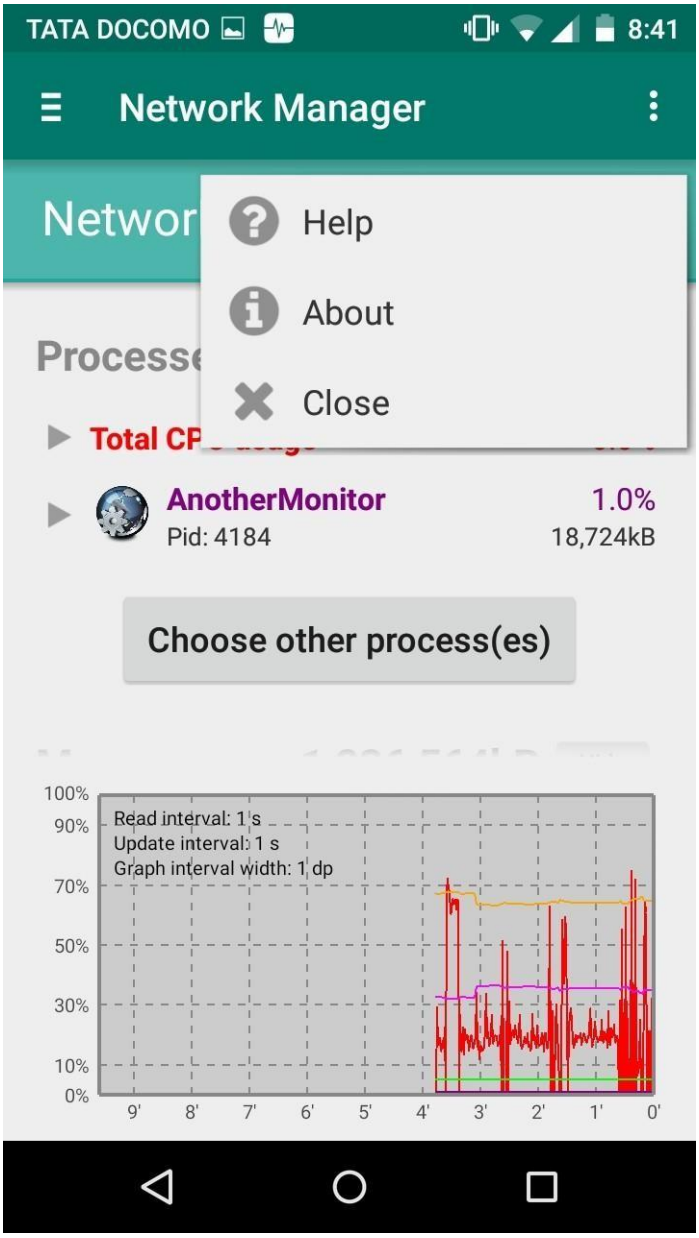
SS-48

- User can select any specific application from the available applications in the device for testing the system performance.



SS-49

- List of applications for which system performance can be tested.



SS-50

- Graph representation of the system performance.

14.TESTING

Android provides an integrated testing framework that helps you test all aspects of your app. The Android SDK and Testing Support Library include tools and APIs for setting up and running test apps within an emulator or on the device you are targeting. You can build and execute tests whether you are working in Android Studio or working from the command line.

1.**Building Instrumented Unit Tests** - Build more complex unit tests that have Android dependencies which cannot be easily filled by using mock objects.

2.**Automating User Interface Tests** - Create tests to verify that the user interface behaves correctly for user interactions within a single app or for interactions across multiple apps.

3.**Testing App Component Integrations** - Verify the behavior of components that users do not directly interact with, such as a Service or a Content Provider.

Writing and running tests are important parts of the Android app development cycle. Well-written tests can help you catch bugs early in development and give you confidence in your code. Using Android Studio, you can run local unit tests or instrumented tests on a variety of physical or virtual Android devices. You can then analyze the results and make changes to your code without leaving the development environment.

Test Case ID	Steps(Description)	Expected Result	Actual Result	Pass/Fail
BF001	Open application	The activity for Device Discovery must appear.	The activity for Device Discovery gets opened	PASS
	Click on “Discover” button when app starts.	Should search for all the devices connected in a LAN with their IP and MAC address.	When search completes it shows all devices along with their IP and MAC address.	PASS
	Select any particular device from result	It should display option to Scan Port, Change Name and System Property.	It display option to Scan Port, Change Name and System Property.	PASS
	Select option “Scan Port” To scan open ports.	It should open new activity and start scanning open ports and display results.	It opens new activity and starts scanning open ports and displays results.	PASS
	Click on “Options” button	The activity for Options must appear.	The activity for options gets opened.	PASS
	Select options like General / Discovery / Port Scan / Wifi	It should open preference screen for selecting settings for options like General / Discovery / Port Scan / Wifi	It opens preference screen for selecting settings for options like General / Discovery / Port Scan / Wifi	PASS
BF002	Open action bar and select Ping option from Left Hand Navigation	The activity for Ping must appear	The activity for Ping gets opened	PASS
	Enter URL or IP address to for host and click on Ping button.	If URL or IP not passes validation error message should be shown	Error message is displayed on screen.	PASS
	Enter URL or IP address to for host and click on Ping button	If URL or IP passes validation and should display ping result.	Ping result is displayed on screen	PASS
	Click on share button	Should display list of all apps present in device where sharing is possible.	Displays list of all apps present in device where sharing is possible.	PASS
BF003	Open action bar and select Multiping	The activity for Multiping must appear	The activity for Multiping gets	PASS

	option from Left Hand Navigation		opened	
	Enter URL or IP address to for host and click on add button.	If URL or IP not passes validation error message should be shown	Error message is displayed on screen.	PASS
	Enter URL or IP address to for host and click on Add button	If URL or IP passes validation and should display multiping result.	Multiping result is displayed on screen	PASS
BF004	Open action bar and select DNS Lookup option from Left Hand Navigation	The activity for DNS Lookup must appear	The activity for DNS Lookup gets opened	PASS
	Enter URL or IP address to for host and click on add button.	If URL or IP not passes validation error message should be shown	Error message is displayed on screen.	PASS
	Enter URL or IP address to for host and click on Resolve button	If URL or IP passes validation and should display IP address.	IP address is displayed on screen	PASS
	Click on share button	Should display list of all apps present in device where sharing is possible.	Displays list of all apps present in device where sharing is possible	PASS
BF005	Open action bar and select IP Calculator option from Left Hand Navigation	The activity for IP Calculator must appear	The activity for IP Calculator gets opened	PASS
	Enter IP address in CIDR notation and click on calculate button.	If IP address not passes validation error message should be shown	Error message is displayed on screen.	PASS
	Enter IP address in CIDR notation and click on calculate button.	If IP address passes validation it should calculates the subnet host address range, total usable addresses, the subnet ID, subnet broadcast address for given input IP address with CIDR notation.	It calculates the subnet host address range, total usable addresses, the subnet ID, subnet broadcast address for given input IP address with CIDR notation.	PASS

	Click on share button	Should display list of all apps present in device where sharing is possible.	Displays list of all apps present in device where sharing is possible	PASS
BF006	Open action bar and select Traceroute option from Left Hand Navigation	The activity for Traceroute must appear	The activity for Traceroute gets opened	PASS
	Enter URL or IP address for host and click on Launch button.	If URL or IP not passes validation error message should be shown	Error message is displayed on screen.	PASS
	Enter URL or IP address to for host and click on Launch button	If URL or IP passes validation then it should displaying hosts present on route to destination.	Displays hosts present on route to destination.	PASS
BF007	Open action bar and select System Property option from Left Hand Navigation	The activity for System Property must appear	The activity for System Property gets opened	PASS
	Open action bar and select System Property option from Left Hand Navigation	It should display all system property like host, OS name, model, product name, manufacturer, brand name, OS version, Hardware id, API level.	It displays all system property like host, OS name, model, product name, manufacturer, brand name, OS version, Hardware id, API level.	PASS
BF008	Open action bar and select CPU Utilization option from Left Hand Navigation	The activity for CPU Utilization must appear	The activity for CPU Utilization gets opened	PASS
	Click on “Choose Another Processes” button to select apps running in background.	It should display list of all apps present on the device.	It displays list of all apps present on the device.	PASS
	Select apps and click on OK button	It should now start monitoring memory and CPU utilization of selected apps.	It starts monitoring memory and CPU utilization of selected apps.	PASS
	Click on “Memory” button to start viewing memory consumption of apps.	It should display memory consumption of selected apps.	It displays memory consumption of selected apps.	PASS

	Click on “CPU Usage” button to start viewing CPU consumption of apps.	It should display CPU usage of selected apps.	It displays CPU usage of selected apps.	PASS

15.USER MANUAL

General Information

Overview of the application

Mobile Application 'Network Manager' will serve all the users and help them in facilitating their work in a more convenient, flexible and a user- friendly manner. The application will allow the user to view all the connected devices to the network and provides functionalities like Ping, Multi Ping, IP Calculator, DNS Lookup, Traceroute, Port Scan, System Performance and System properties.

Audience of the application

Network Administrator, IT Professionals, General Non IT users can use Mobile Application connecting to the central database/system.

System Configurations

Application runs on all phones and tablets starting with Android 4.0.3 (Ice Cream Sandwich) and later on versions.

Getting Started

Downloading and installing the application

The application can be downloaded and installed with the help of Google PlayStore Services.

Navigation

The application provides navigation drawer to choose the functionality. But first screen which will appear after opening the application will be Network Discovery functionality.

Network Discovery Screen

- ✓ This screen provides option to discover all the devices which are connected to the LAN by clicking on 'Discover' button.
- ✓ By selecting any device from the discovered devices user can get different options like 'scan port', 'Change Name' and 'System Property'.
- Scan port open new activity and start scanning open ports and display results.
- ✓ Options gives different options like 'General', 'Discovery', 'Wifi'.

Ping Functionality

- It is the second functionality in the navigation drawer.
- Open action bar and select Ping option from Left Hand Navigation.
- Enter URL or IP address to for host and click on Ping button.
- If we get the proper output so we can share it on different application by share button.

MultiPing Functionality

- Open action bar and select Multiping option from Left Hand Navigation.
- Enter URL or IP address to for host and click on add button button if URL or IP not passes validation error message should be shown.
- Enter URL or IP address to for host and click on Add button if URL or IP passes validation and should display multiping result.

IP Calculator Functionality

- Open navigation drawer and select IP Calculator option from Left Hand Navigation.
- Enter IP address in CIDR notation and click on calculate button if IP address not passes validation error message should be shown.
- Enter IP address in CIDR notation and click on calculate button if IP address passes validation it should calculates the subnet host address range, total usable addresses, the subnet ID, subnet broadcast address for given input IP address with CIDR notation.
- Share button displays list of all apps present in device where sharing is possible.

DNS Lookup Functionality

- Open navigation drawer and select DNS Lookup option from Left Hand Navigation.
- Enter URL or IP address to for host and click on add button if URL or IP not passes validation error message should be shown.
- Enter URL or IP address to for host and click on Resolve button if URL or IP passes validation and should display IP address.
- Share button displays list of all apps present in device where sharing is possible.

Traceroute Functionality

- Open navigation drawer and select Traceroute option from Left Hand Navigation.
- Enter URL or IP address for host and click on Launch button if URL or IP not passes validation error message should be shown.
- Enter URL or IP address to for host and click on Launch button if URL or IP passes

validation then it should displaying hosts present on route to destination

CPU Utilization

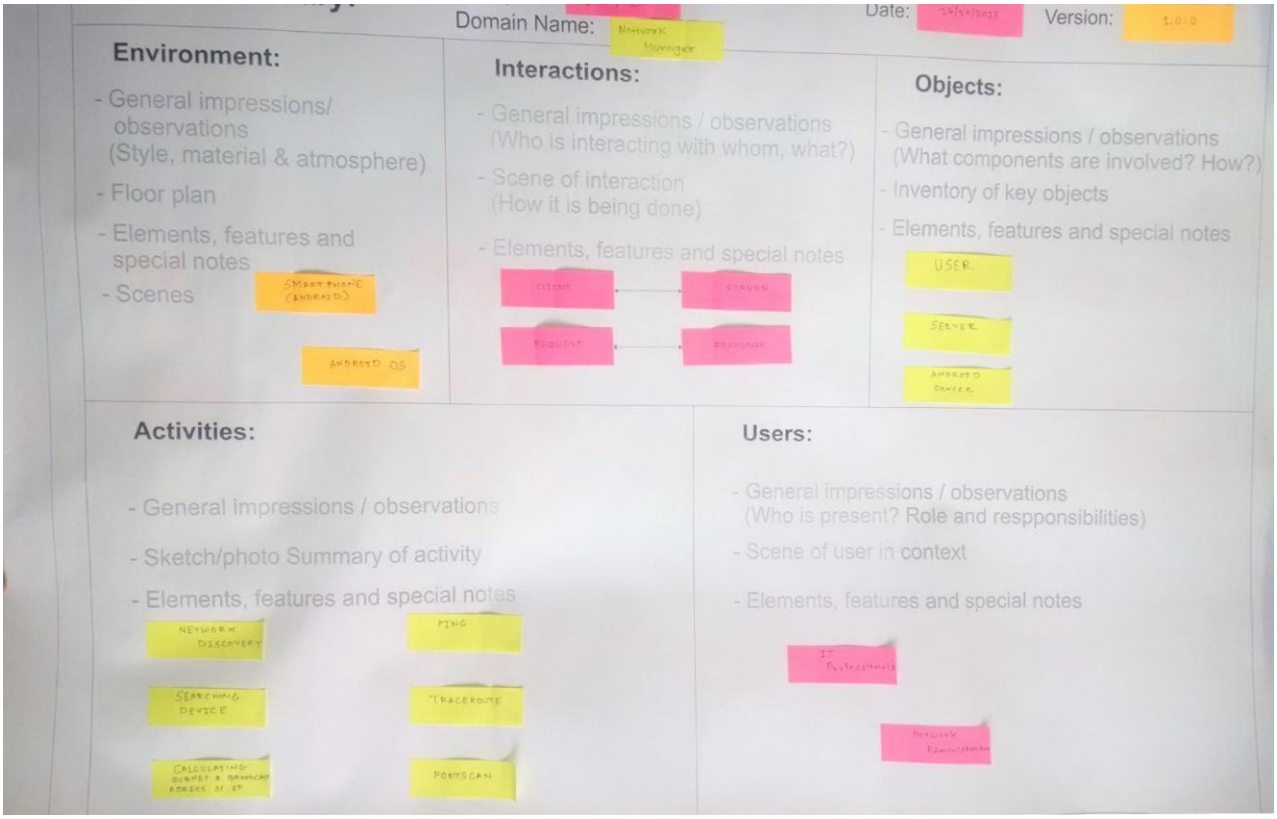
- Open navigation drawer and select CPU Utilization option from Left Hand Navigation.
- ✓ Click on “Choose Another Processes” button to select apps running in background and it should display list of all apps present on the device.
- Select apps and click on OK button and it should now start monitoring memory and CPU utilization of selected apps.
- ✓ Click on “Memory” button to start viewing memory consumption of apps and it should display memory consumption of selected apps.
- ✓ Click on “CPU Usage” button to start viewing CPU consumption of apps which displays CPU usage of selected apps.

System Property

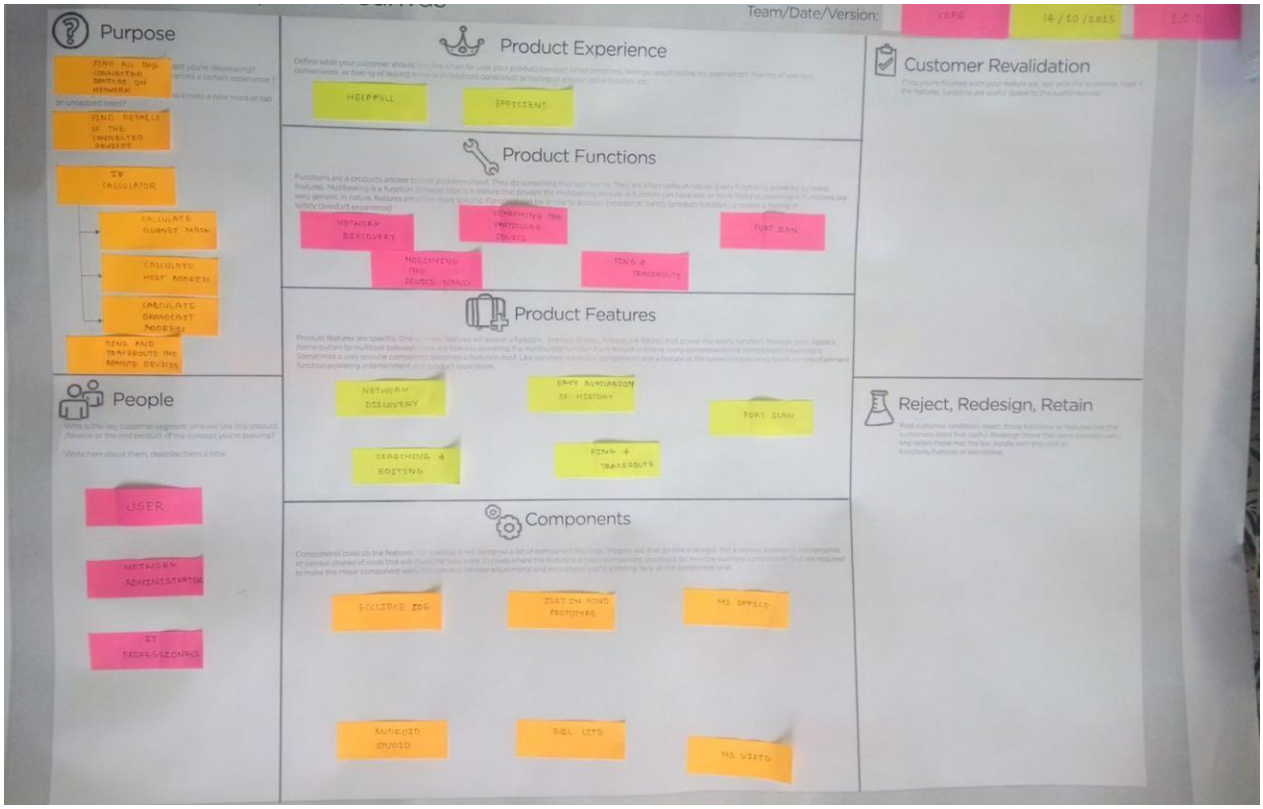
- Open navigation drawer and select System Property option from Left Hand Navigation.
- It displays all system property like host, OS name, model, product name, manufacturer, brand name, OS version, Hardware id, API level.

16.DESIGN CANVAS

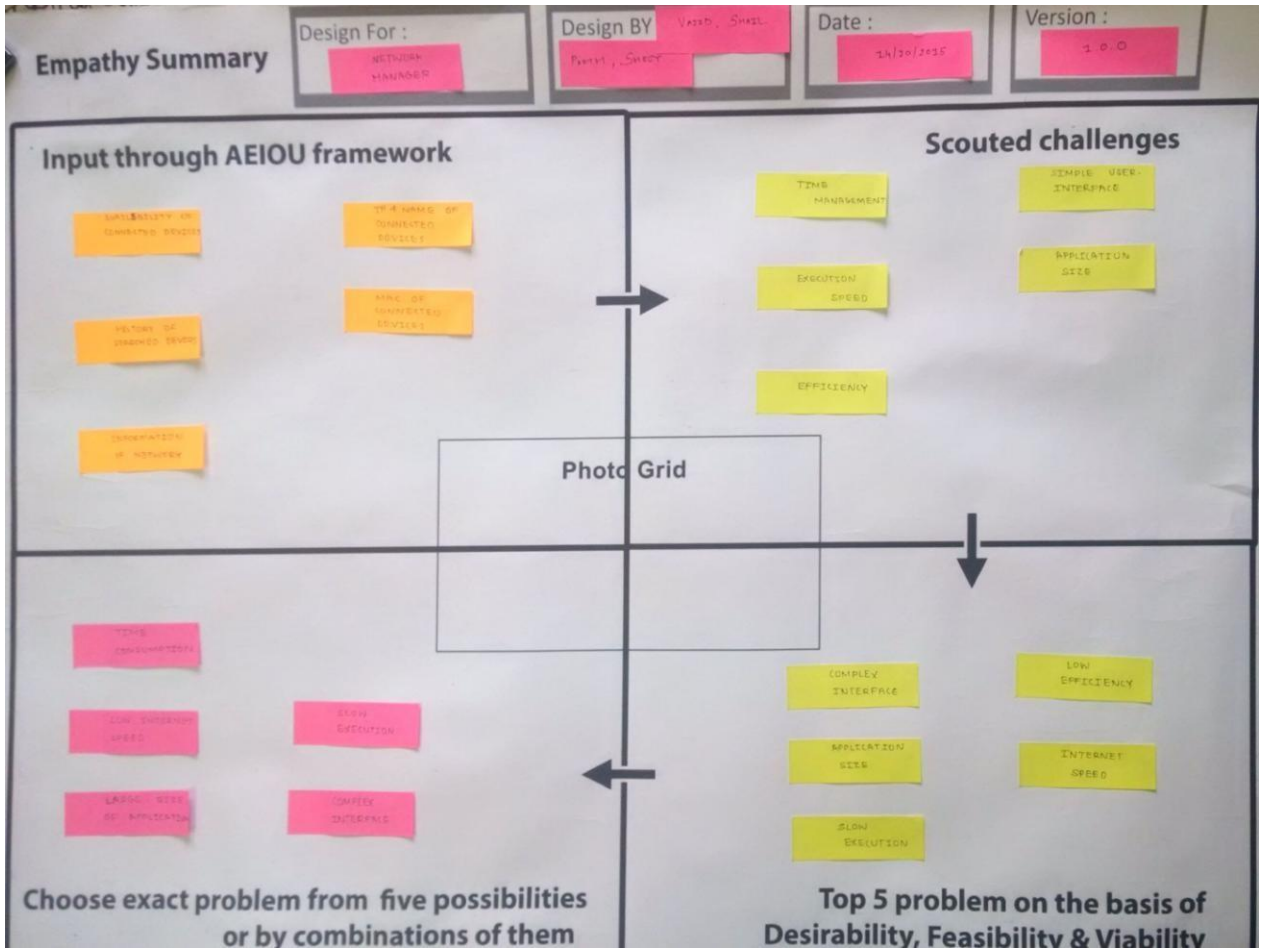
AEIOU Summary



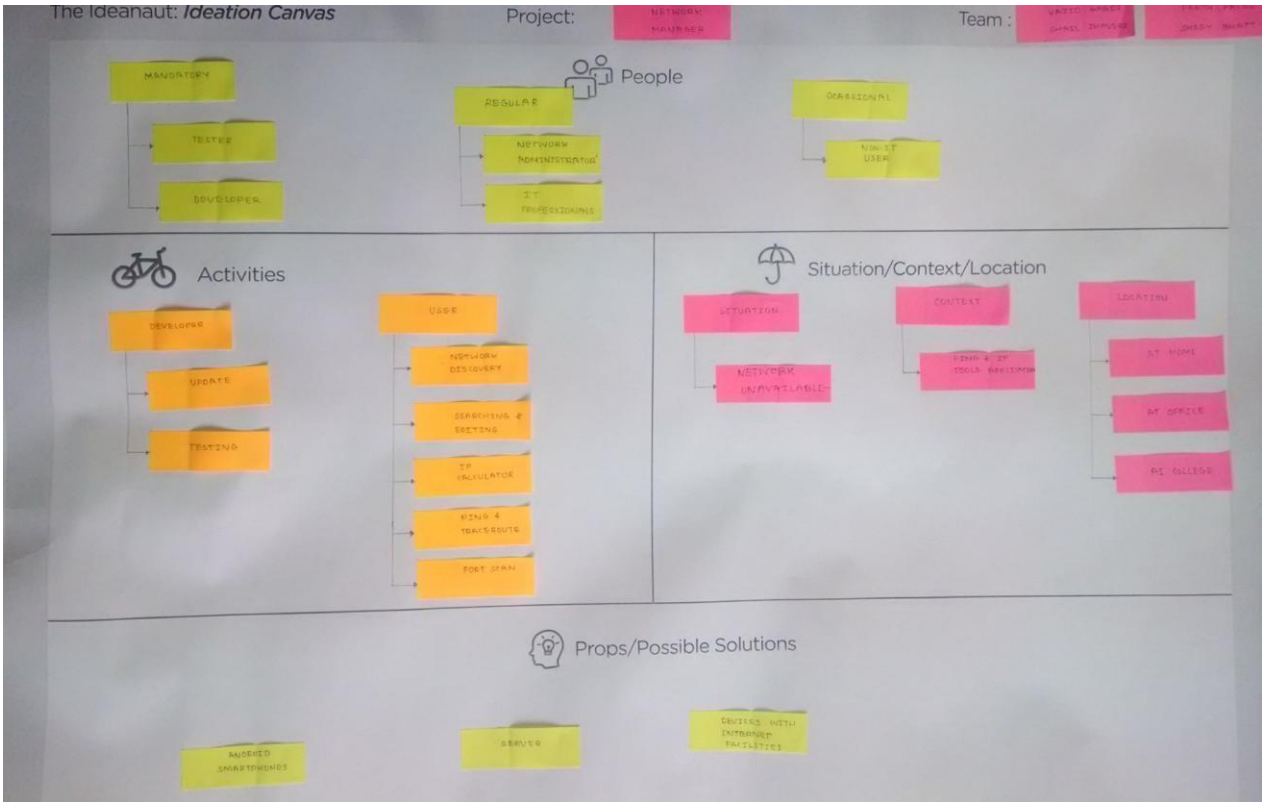
PROJECT DEVELOPMENT CANVAS



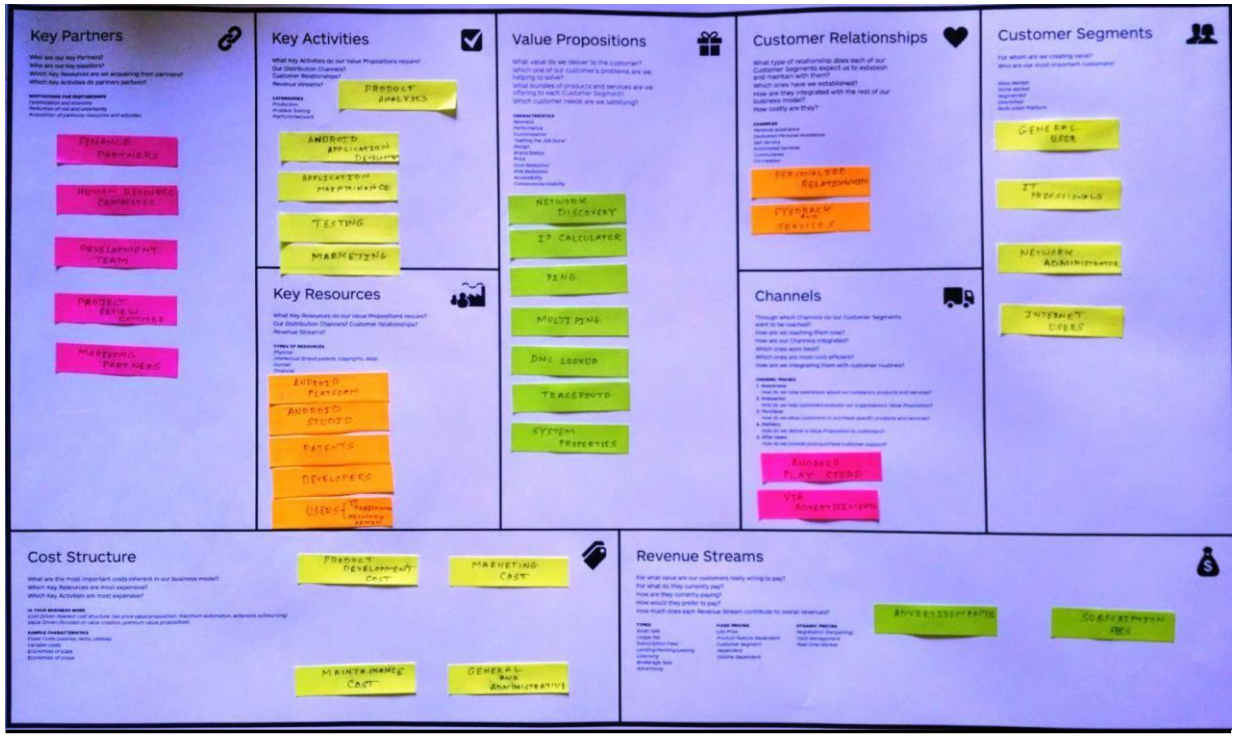
EMPATHY SUMMARY



IDEATION SUMMARY



17. BUSINESS MODEL CANVAS



18. BIBLIOGRAPHY

Books

- Software Engineering: A Practitioner's Approach by Roger S. Pressman
- Object Oriented Modelling and Design: James Rumbaugh
- Software Engineering by Ian Sommerville
- Beginning Android 4 Application Development
- Head First Android

Links & Resources

- http://www.ipindia.nic.in
- https://en.wikipedia.org/wiki/Network_Discovery
- https://www.geeksforgeeks.com
- http://www.w3schools.org
- http://www.jsoneditoronline.org
- http://www.justinmind.com
- http://www.developer.android.com
- http://www.vogella.com
- http://mkyong.com
- http://www.thenewboston.com
- http://www.stackoverflow.com

19. FUTURE SCOPE

More modules can be incorporated in the mobile application as the need arises. The mobile application can also be expanded to incorporate more functions of the Network Manager so it can be helpful to all the users mainly network administrator and IT professionals.

20. CONCLUSION

Network Manager is an android based app to discover, monitor, analyze and configure networks from anywhere. By using this app you can find out which devices are connected to your Wi-Fi network, in just a few seconds. Fast and accurate, This is a professional App for network analysis. A simple and intuitive interface helps you evaluate system performance. By installing Network Manager,we can also perform network related operations on remote netwsorks.

APPENDIX

- Patent Search and Analysis Report
- Business Model Canvas Report
- Patent Drafting Exercise
- Periodic Progress Report

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Kagdi Vajid Mohamedrafik**,

Studied Patent Number for generation of PSAR : 15BE7_120280107011_1

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Google Patents
Web link of database	:	https://patents.google.com/
2. Keywords Used for Search	:	ping,host,destination,client, server
3. Search String Used	:	ping, host, destination
4. Number of Results/Hits getting	:	6422

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	Android Application on Networking
6 (a) : IPC class of the studied patent	:	H04L29/12009
7. Title of Invention	:	Method and system for determining a path between two points of an IP network over which datagrams are transmitted
8. Patent No.	:	US 2005/0018647 A1
9. Application Number	:	US10809576
9 (a) : Web link of the studied patent	:	https://patents.google.com/patent/US20050018647A1/
10. Date of Filing/Application (DD/MM/YYYY)	:	25/03/2004
11. Priority Date (DD/MM/YYYY)	:	23/07/2003
12. Publication/Journal Number	:	Int. Cl.7
13. Publication Date (DD/MM/YYYY)	:	27/01/2005
14. First Filled Country	:	United States

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1	United States	US10809576

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Eric Lebrun	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
2	Carros FR	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
3	Arnaud Lund	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
4	Cagnes sur Mer	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	INTERNATIONAL BUSINESS MACHINES CORPORATION	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

The method of the present invention comprises the following steps:

A message (601) is sent from the Network Manager station (612) by computer programming within the Network Manager station to the client station (610) to launch the process.

Upon receipt of the message (601) sent by the Network Manager station, the client station (including computer programming executing within the client station) sends probe datagrams toward the server station (611) with increasing TTL values similarly to the traceroute program (602 to 604). These probe datagrams (using the "spoofing" technique) include, as source address, the IP address of the Network Manager station (instead of the IP address of the client station).

The intermediate routers (613) send their replies back (when TTL=0) according to the traceroute program described above. However; because the intermediate routers rely on the spoofed address inserted in the probe datagrams, the replies (606 to 608) are sent back directly to the Network Manager station.

The replies are collected by computer programming within the Network Manager station, which determines the first part of the path up to the network failure

20. Specific Problem Solved / Objective of Invention

The present invention relates generally to computer networks, and more particularly With a method, system and computer program for determining the transmission path of datagrams sent between two points of an Internet Protocol (IP) network. An object of the present invention is to enable a Network Manager to locate a break in the IP path between a source device and a destination device Without taking control of the source device.

21. Brief about Invention

System, computer program and method for determining a transmission path of datagrams in an IP network from a source device to a destination device. The source device receives from a network manager station, a message for retrieving information related to the transmission path of datagrams to the destination device. The message comprises a destination address and a source address. The destination address is an IP address of the destination device, and the source address is an IP address of the network manager device. The source device sends a plurality of probe datagrams to a respective plurality of IP network devices along the transmission path to the destination device. Each probe datagram comprises as destination address, the IP a ddress of the destination device and as source address, the IP address of the network manager station. Consequently, replies, if any, to the probe datagrams are sent back directly to the network manager station by the IP network device along the transmission path, bypassing said the device. The invention also resides in the network manager station and the computer program product executing at the network manager station which sends the message to the source device, and receives and analyzes the replies to the probe datagrams to locate the break in the transmission path.

22. Key learning Points

A method for determining a transmission path of datagrams in an IP network from a source device to a destination device, said method comprising the steps of:
said source device receiving from a network manager station, a message for retrieving information related to the transmission path of datagrams to said destination device, said message comprising a destination address and a source address, said destination address being an IP address of the destination device, and said source address being an IP address of the network manager device; and said source device sending a plurality of probe datagrams to a respective plurality of IP network devices along the transmission pat h to the destination device, each probe datagram comprising as destination address, the IP address of the destination device and as source address, the IP address of the network manager station, such that replies, if any, to s aid probe datagrams are sent back directly to the network manager station by the IP network device along the transmissi on path, bypassing said source device.

2. The method according to claim 1 wherein the step of sending a plurality of probe datagrams to a respective plurality of IP network devices, comprises the step of:
inserting a value in each probe datagram sent to an IP network device to cause the respective IP network device to reply to said network manager station.

3. The method according to claim 1 wherein the step of inserting a value in each probe datagram sent to a respective IP network device, comprises the step of:
inserting said value in the “time to live” (TTL) field of the IP header of each said probe datagram, said value being decremented by each IP network device along the transmission path.

4. The method according to claim 1 wherein said probe datagrams fully comply with a traceroute protocol except the source address in the IP header is replaced by the IP address of the network manager station.

5. The method according to claim 1 wherein said IP network devices are IP routers.

6. The method according to claim 1 wherein said destination device is a server station; and said source device is a client station.

23. Summary of Invention

The present invention resides in a system, computer program and method for determining a transmission path of datagrams in an IP network from a source device to a destination device. The source device receives from a

network manager station, a message for retrieving information related to the transmission path of datagrams to the destination device. The message comprises a destination address and a source address. The destination address is an IP address of the destination device, and the source address is an IP addr ess of the network manager device. The source device sends a plurality of probe datagrams to a respective plural ity of IP network devices along the transmission path to the destination device. Each probe datagram comprises as destination address, the IP address of the destination device and as source address, the IP address of the network manager station. Consequently, replies, if any, to the probe datagrams are sent back directly to the network manager station by the IP network device along the transmission path, bypassing said the device. The invention also resides in the network manager station and the computer program product executing at the network manager station Which sends the message to the source device, and receives and analyzes the replies to the probe datagrams to locate the break in the transmission path.

24. Number of Claims : 19

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

The data packets can definitely made secure by using various authentication protocols.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Kagdi Vajid Mohamedrafik**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107011_2

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	DNS,Lookup,Reverse
3. Search String Used	:	DNS Lookup
4. Number of Results/Hits getting	:	981

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	DNS
6 (a) : IPC class of the studied patent	:	G06F15/16
7. Title of Invention	:	Reducing DNS Lookups
8. Patent No.	:	
9. Application Number	:	13/213131
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0036227.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	19/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Kleinfelter Kevin P Atlanta GA US Littrell	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	ATT Intellectual Property I LP	USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

As known in the art, computers connected to the Internet use the well-known transmission control protocol/internet protocol (TCP/IP) to negotiate the network communications with other computers on the network. TCP/IP network packets are transmitted to other computers using an IP address to identify the source and destination computers. An IP address is currently defined as a 32-bit number which is generally expressed as four octets (converted to their decimal values) separated by a period, for example, 12.34.56.78. Due to the very large number of computers connected to the Internet, it would not be convenient for the users to memorize the IP address assigned to each of the computers being accessed. Accordingly, a Domain Name System (DNS) was implemented whereby a computer may be identified by a mnemonic host name, such as www.whitehouse.gov.

20. Specific Problem Solved/ Objective of Invention

A method, comprising: receiving a file from a server in response to an initial request by a client, the file including multiple universal resource locators containing a hostname; identifying an Internet Protocol address associated with the hostname; creating a modified file including replacing each occurrence of the hostname with the Internet Protocol address for each universal resource locator containing the hostname within the file; and providing the modified file to the client in response to the initial request.

21. Briefabout Invention

DNS is a name resolution method that allows the users and applications to initiate network communications with a hostname, without an IP address,for other computers on the network. The DNS server maintains a database of hostnames and their corresponding IP addresses. The users can open a web page on his or her web browser by directing the application to connect to a particular universal resource location (URL) which identifies theweb server and the particular document to be downloaded to the browser. When the sending computer or application needs to open a network connection to another computer, it first contacts a DNS server to resolve the other computer's hostname to its IP address. DNS servers are distributed throughout the Internet. DNS servers communicate with other DNS servers to resolve a network address.

The standard convention for a URL is 'protocol://host's name/name of file.' The protocol includes, for example, FTP (filetransferprotocol),telnet and HTTP (hypertext transfer protocol). Typically, HTTP is used to transfer information (also referred to as "content") from a web server application for display by web browser (a web client computer application). HTTP is the set of rules for exchanging files, for example, text, graphic images, sound, and video, in the Internet. Content is generally organized into groups of data, referred to as a "web page," defined in documents downloaded from the web server to the browser. The web page is a text file that contains text and a set of HTML (hyper text markup language) tags that describe how the text should be formatted when a browser displays the web page for the user.

22. Keylearning Points

In the present invention, a router intercepts the incoming HTML document and rewrites the HTML document before sending it to a web browser. The router examines the HTML document and requests one DNS lookup requestforeachofthe distinct hostnames intheURLsassociatedwithimage elements. Upon receiving IP addresses, each of which corresponds to the each of the distinct hostnames, the router modifies the HTML document by replacing the distinct hostnames, including their recurrences, in the URLs associated with image elements with their corresponding IP addresses. The router provides the web browser with the modified HTML document containing the IP addresses of the web servers, rather than the hostnames, in the URLs associated with image elements. The web browser can open network connections to the web servers to download the image elements in a web page without requesting a DNS lookup. In this specification and claims, the term "image element" is used as an example of the files to be downloaded for display of a web page.

23. Summary ofInvention

In an embodiment of the present invention, a method for reducing Domain Name System (DNS) lookup traffic in a computer data network in a system including a router in communication with a client computer includes the steps of receiving a DNS lookup request through a web browser when the user requests to open a particular URL. The router sends the DNS lookup request for a hostname of the web server to a DNS server and receives a corresponding IP address. The router forwards the IP address to the web browser and the web browser sends a network connection request with a file transfer request to the router. The router forwards the request to the web server. The web server responds to the request by sending an HTML document for the web page. Upon receiving the HTML document, the router examines the HTML document for the URLs associated with image elements to be downloaded for display of a web page and sends one DNS lookup request for each of the distinct hostnames, regardless of how many times that distinct hostname appears in the HTML document. The router receives IP addresses, each of which corresponds to one of each of the distinct hostnames and modifies the HTML document by replacing the each of the distinct hostnames, including their recurrences, in the URLs associated with the image elements with theircorresponding IP addresses.

24. Number of Claims : 20

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

In describing representative embodiments of the present invention, the specification may have presented the method and/or process of the present invention as a particular sequence of steps. However, to the extent that the method or process does not rely on the particular order of steps set forth herein, the method or process should not be limited to the particular sequence of steps described. As one of ordinary skill in the art would appreciate, other sequences of steps may be possible. Therefore, the particular order of the steps set forth in the specification should not be construed as limitations on the claims. In addition, the claims directed to the method and/or process

of the present invention should not be limited to the performance of their steps in the order written, and one skilled in the art can readily appreciate that the sequences may be varied and still remain within the spirit and scope of the present invention.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Kagdi Vajid Mohamedrafik**,

Studied Patent Number for generation of PSAR : 15BE7_120280107011_3

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	IP,LAN,Network,Wake, On, LAN
3. Search String Used	:	Wake On LAN
4. Number of Results/Hits getting	:	798

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	LAN
6 (a) : IPC class of the studied patent	:	H04B10/00; (IPC1-7): H04B10/00; H04B10/00
7. Title of Invention	:	Wake-on LAN device
8. Patent No.	:	
9. Application Number	:	10/147671
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2003/0215243.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	16/05/2002
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Booth Bradley J	Austin, TX, US

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	BOOTH BRADLEY J	USA

18. Applicant for Patent is : Individual

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

Anapparatuscomprising:anopticaltransceiver adapted to transmit data in or receive data from an optical transmission medium; and adata transceiver coupled to transmit data between the optical transceiver and a media independent interface (MII), the data transceiver comprising logic to power down at least a portion of the optical transceiver in response to detection of a power down condition.

20. Specific Problem Solved / Objective of Invention

] Environmental regulations have imposed restrictions on the rate of power consumption of processing platforms and networking equipment. Such equipment may transition to one or more power states as defined in the Advanced Configuration and Power Interface (ACPI) upon detecting an event or condition. For example, a processing platform may transition to a lower power state and resume to a full power condition upon detection of an event.

21. Brief about Invention

Reference throughout this specification to"one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, the appearances of the phrase "in one embodiment" or "an embodiment" in various places throughout this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in one or more embodiments.

"Machine-readable" instructions as referred to herein relates to expressions which may be understood by one or more machines for performing one or more logical operations. For example, machine-readable instructions may comprise instructions which are interpretable by a processor compiler for executing one or more operations on one or more data objects. However, this is merely an example of machine-readable instructions and embodiments of the present invention are not limited in this respect.

22. Key learning Points

A "processing system" as discussed herein relates to a combination of hardware and software resources for accomplishing computational tasks. However, this is merely an example of a processing system and embodiments of the present invention are not limited in this respect. A "host processing system" relates to a processing system which may be adapted to communicate with a "peripheral device." For example, a peripheral device may provide inputs to or receive outputs from an application process hosted on the host processing system. However, these are merely examples of a peripheral device and a host processing system, and embodiments of the present invention are not limited in these respects.

23. Summary of Invention

A "communication adapter" as referred to herein relates to a device which may be coupled to a transmission medium to transmit data to or receive data from other devices coupled to the transmission medium. For example, a communication adapter may comprise a network adapter adapted to transmit data to or receive data from devices coupled to a network such as a local area network. Such a network adapter may be communicate with the other devices according to any one of several data communication formats such as, for example, communication formats according any of the IEEE standard 802.3, asynchronous transfer mode (ATM), synchronous optical network (SONET) or synchronous digital hierarchy (SDH) standards . In alternative embodiments, a communication adapter may comprise any one of other I/O devices such as, for example, an adapter to a data storage system. However, these are merely examples of a communication adapter and embodiments of the present invention are not limited in theserespects.

24. Number of Claims : 32

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Networking devices employedin processing platforms andnetworking equipment typically consume a substantial portionof the overallpower consumed bysuch systems.Additionally, these systems typically increase consumption as they incorporate networking devices for higher rates of data transmission.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Kagdi Vajid Mohamedrafik**,

Studied Patent Number for generation of PSAR : 15BE7_120280107011_4

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	ping,IP,host
3. Search String Used	:	ping
4. Number of Results/Hits getting	:	747

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	ping
6 (a) : IPC class of the studied patent	:	H04Q9/00; G06F15/00
7. Title of Invention	:	Ping Server
8. Patent No.	:	
9. Application Number	:	13/023368
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0200426.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	02/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Diluciano Joshua Dominic Spokane Valley WA US	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Avista Corporation	WA,USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a plurality of utility devices within the utility service area to which to send an information request, based on the detected incident; interrogating one or more utility devices of the plurality of utility devices to determine a communication technology and/or a communication protocol used by the one or more utility devices; sending an information request to the plurality of utility devices using one or more communication technologies and/or one or more communication protocols, based at least in part on the results of the interrogation; receiving results from the one or more utility devices based on the sending; and formulating a response to the incident based on the results of the sending.

20. Specific Problem Solved/ Objective of Invention

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a first component of the utility service area to which to send an information request, based on the detected incident; determining a first communication technology and a first communication protocol used by the first component; sending an information request to the first component using the first communication technology and the first communication protocol; selecting, by the one or more processors, one or more subsequent components of the utility service area to which to send an information request, the selecting based at least in part on an algorithm; discovering one or more subsequent communication technologies and/or one or more subsequent communication protocols used by the one or more subsequent components; adjusting the algorithm based on the discovering; sending one or more information requests to the one or more subsequent componentsusingtheoneormoresubsequent communication technologies and the one or more subsequent communication protocols; receiving results from the one or more subsequent components based on the sending; and initiating a response to the incident based on the received results.

21. Brief about Invention

As part of automating their processes, some utilities and other service providers have employed end point devices (such as meters, for example) with an ability to communicate to a mobile or fixed hub or collector. Many of these endpointdevicesareconfiguredto broadcast usage information, and the like, to the hub,usingone-way communication (e.g., Automatic Meter Reading (AMR)). Some "smart" end point devices, however, are also able to receive and respond to limited inquiries from a hub device. Many of the end point devices (and hubs) capable of one-way or two-way communication transfer messages using particular technologies and/or proprietary communication protocols. For example, some devices may communicate via power line carrier while others may use wireless technologies such as cellular, Wireless Fidelity (Wi-Fi™), or the like. Consequently, utilities may use multiple different communication technologies and/or protocols across their service areas due to upgrades, expansions, and the like, occurring over the years. Integration of such a heterogeneous network of devices and communication systems can add layers of difficulty to a comprehensive communication scheme, and thus, complicate an effort to automate the diagnosis of power problems within the service area.

22. Key learning Points

Some utilities and service providers use an intelligent map system to track service calls. For example, when a customer calls in an event (e.g., a power outage, etc.), service personnel may change an attribute associated with an asset connected to the event (such as a meter, transformer, service point, etc.). Changing the attribute may then result in the asset being displayed in a different manner on the map, thereby marking the location of the event on the map. Multiple calls from customers may result in a pattern of marked assets that can help target a physical location to investigate when diagnosing a service area problem. Since such a system relies on customer reports, however, it may not be timely or accurate. For example, customers may not report an event or they may report it inaccurately. Even with accurate reporting, such a system may have limitations. For example, such a system still 1) is labor and time intensive; 2) is reactive rather than proactive, possibly resulting in delays in service restoration; and 3) does not provide for verification of service restoration, since most customers do not call a service provider to report a restoration ofservice.

23. Summary of Invention

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential feature s of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

This application describes techniques to assist in predicting, diagnosing, and/or managing an incident in a utility service area.

In one aspect, an outage management method includes detecting an incident in a hierarchal service area. At least one node (e.g., station, device, equipment, etc.) of the service area is identified as being associated with the incident. A preset quantity of nodes of the service area is selected for communication, based on the hierarchy of the system and/or a physical location of the node(s). The selection of nodes may also be made according to an algorithm, which may be adjusted based on various factors of the incident and/or the service area. The preset quantity of nodes is pinged, with the results of the pinging used to determine an appropriate response to the incident.Thedeterminedresponsemaythen be initiated. In some aspects, the pinging includes requesting information from the nodes and/or two-way communication between the nodes and a communication system.

24. Number of Claims : 36

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

71 to 90%

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Whilevariousdiscreetembodiments have been described throughout,the individual features ofthe various embodimentsmaybecombinedto form other embodiments notspecifically described. The embodiments formed by combining the features of described embodiments are also outage management systems.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Jhaveri Shail Rajivbhai**,

Studied Patent Number for generation of PSAR : 15BE7_120280107031_1

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Google Patents
Web link of database	:	https://patents.google.com/
2. Keywords Used for Search	:	ping,host,destination,client, server
3. Search String Used	:	ping, host, destination
4. Number of Results/Hits getting	:	6422

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	Android Application on Networking
6 (a) : IPC class of the studied patent	:	H04L29/12009
7. Title of Invention	:	Method and system for determining a path between two points of an IP network over which datagrams are transmitted
8. Patent No.	:	US 2005/0018647 A1
9. Application Number	:	US10809576
9 (a) : Web link of the studied patent	:	https://patents.google.com/patent/US20050018647A1/
10. Date of Filing/Application (DD/MM/YYYY)	:	25/03/2004
11. Priority Date (DD/MM/YYYY)	:	23/07/2003
12. Publication/Journal Number	:	Int. Cl.7
13. Publication Date (DD/MM/YYYY)	:	27/01/2005
14. First Filled Country	:	United States

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1	United States	US10809576

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Eric Lebrun	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
2	Carros FR	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
3	Arnaud Lund	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)
4	Cagnes sur Mer	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	INTERNATIONAL BUSINESS MACHINES CORPORATION	IBM CORPORATION IPLAW IQOA/40-3 1701 NORTH STREET ENDICOTT, NY 13760 (US)

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

The method of the present invention comprises the following steps:

A message (601) is sent from the Network Manager station (612) by computer programming within the Network Manager station to the client station (610) to launch the process.

Upon receipt of the message (601) sent by the Network Manager station, the client station (including computer programming executing within the client station) sends probe datagrams toward the server station (611) with increasing TTL values similarly to the traceroute program (602 to 604). These probe datagrams (using the "spoofing" technique) include, as source address, the IP address of the Network Manager station (instead of the IP address of the client station).

The intermediate routers (613) send their replies back (when TTL=0) according to the traceroute program described above. However; because the intermediate routers rely on the spoofed address inserted in the probe datagrams, the replies (606 to 608) are sent back directly to the Network Manager station.

The replies are collected by computer programming within the Network Manager station, which determines the first part of the path up to the network failure

20. Specific Problem Solved / Objective of Invention

The present invention relates generally to computer networks, and more particularly With a method, system and computer program for determining the transmission path of datagrams sent between two points of an Internet Protocol (IP) network. An object of the present invention is to enable a Network Manager to locate a break in the IP path between a source device and a destination device Without taking control of the source device.

21. Briefabout Invention

System, computer program and method for determining a transmission path of datagrams in an IP network from a source device to a destination device. The source device receives from a network manager station, a message for retrieving information related to the transmission path of datagrams to the destination device. The message comprises a destination address and a source address. The destination address is an IP address of the destination device, and the source address is an IP address of the network manager device. The source device sends a plurality of probe datagrams to a respective plurality of IP network devices along the transmission path to the destination device. Each probe datagram comprises as destination address, the IP ad dress of the destination device and as source address, the IP address of the network manager station. Consequently, replies, if any, to the probe datagrams are sent back directly to the network manager station by the IP network device along the transmission path, bypassing said the device. The invention also resides in the network manager station and the computer program product executing at the network manager station which sends the message to the so urce device, and receives and analyzes the replies to the probe datagrams to locate the break in the transmission path.

22. Key learningPoints

A method for determining a transmission path of datagrams in an IP network from a source device to a destination device, said method comprising the steps of:

said source device receiving from a network manager station, a message for retrieving information related to the transmission path of datagrams to said destination device, said message comprising a des tination address and a source address, said destination address being an IP address of the destination device, and said source address being an IP address of the network manager device; and said source device sending a plurality of probe datagrams to a respective plurality of IP network devices along the transmission pat h to the destination device, each probe datagram comprising as destination address, the IP address of the destination device and as source address, the IP address of the network manager station, such that replies, if any, to said probe datagrams are sent back directly to the network manager station by the IP network device along the transmission path, bypassing said source device.

2. The method according to claim 1 wherein the step of sending a plurality of probe data grams to a respective plurality of IP network devices, comprises the step of:

inserting a value in each probe datagram sent to an IP network device to cause the respective IP network device to reply to said network managerstation.

3. The method according to claim 1 wherein the step of inserting a value in each probe datagram sent to a respective IP network device, comprises the step of:

inserting said value in the “time to live” (TTL) field of the IP header of each said probe datagram, said value being decremented by each IP network device along the transmission path.

4. The method according to claim 1 wherein said probe datagrams fully comply with a traceroute protocol except the source address in the IP header is replaced by the IP address of the network manager station.

5. The method according to claim 1 wherein said IP network devices are IP routers.

6. The method according to claim 1 wherein said destination device is a server station; and said source device is a client station.

23. SummaryofInvention

The present invention resides in a system, computer program and method for determining a transmission path of datagrams in an IP network from a source device to a destination device. The source device receives from a

network manager station, a message for retrieving information related to the transmission path of datagrams to the destination device. The message comprises a destination address and a source address. The destination address is an IP address of the destination device, and the source address is an IP addr ess of the network manager device. The source device sends a plurality of probe datagrams to a respective plurality of IP network devices along the transmission path to the destination device. Each probe datagram comprises as destination address, the IP address of the destination device and as source address, the IP address of the network manager station. Consequently, replies, if any, to the probe datagrams are sent back directly to the network manager station by the IP network device along the transmission path, bypassing said the device. The invention also resides in the network manager station and the computer program product executing at the network manager station Which sends the message to the source device, and receives and analyzes the replies to the probe datagrams to locate the break in the transmissionpath.

24. Number of Claims : 19

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

The data packets can definitely made secure by using various authentication protocols.

GUJARAT TECHNOLOGICAL UNIVERSITY
(GTU)
GTU INNOVATION COUNCIL (GIC)
Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Jhaveri Shail Rajivbhai**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107031_2

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	DNS,Lookup,Reverse
3. Search String Used	:	DNS Lookup
4. Number of Results/Hits getting	:	981

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	DNS
6 (a) : IPC class of the studied patent	:	G06F15/16
7. Title of Invention	:	Reducing DNS Lookups
8. Patent No.	:	
9. Application Number	:	13/213131
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0036227.html
10. Date of Filing/Application (DD/MM/YYYY)	:	19/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Kleinfelter Kevin P Atlanta GA US Littrell	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	ATT Intellectual Property I LP	USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

As known in he art, computers connected to the Internet use he well-known transmission control protocol/internet protocol (TCP/IP) to negotiate the network communications with other computers on the network. TCP/IP network packets are transmitted to other computers using an IP address to identify the source and destination computers. An IP address is currently defined as a 32-bit number which is generally expressed as four octets (converted to their decimal values) separated by a period, for example, 12.34.56.78. Due to the very arge number of computers connected to the Internet, it would not be convenient for the users to memorize the IP address assigned to each of the computers being accessed. Accordingly, a Domain Name System (DNS) was implemented whereby a computer may be identified by a mnemonic host name, such as www.whitehouse.gov.

20. Specific Problem Solved / Objective of Invention

A method, comprising: receiving a file from a server in esponse to an initial request by a client, the file including multiple universal resource locators containing a hostname; identifying an Internet Protocol address associated with the hostname; creating a modified file including replacing each occurrence of the hostname with the Internet Protocol address for ach universal resource locator containing the hostname within the file; and providing the modified file to the client in response to the initial request.

21. Brief about Invention

DNS is a name resolution method that allows the users and applications to initiate network communications with a hostname, without an IP address,or other computers on th network. The DNS server maintains a database of hostnames and their corresponding IP addresses. The users can open a web page on his or her web browser by directing the application to connect to a particular universal resource location (URL) which identifies theweb server and the particular document o be downloaded to the browser. When the sending computer or application needs to open a network connection to another computer, it first contacts a DNS server to resolve he other computer's hostname to its IP address. DNS servers are distributed throughout the Internet. DNS servers communicate with other DNS servers to resolve a network address.

The standard convention for a URL is 'protocol://host's name/name of file.' The protocol includes, for example, FTP (filetransferprotocol),telnet and HTTP (hypertext transfer protocol). Typically, HTTP is used to transfer information (also referred to as "content") from a web server application for display by web browser (a web client computer application). HTTP is the set of rules for exchanging files, for example, text, graphic images, sound, and video, in the Internet. Content is generally organized into groups of data, referred to as a "web page," defined in documents downloaded from the web server to the browser. The web page is a text file that contains text and a set of HTML (hyper text markup language) tags that describe how the text should be formatted when a browser displays the web page for the user.

22. Keylearning Points

In the present invention, a router intercepts the incoming HTML document and rewrites the HTML document before sending it to a web browser. The router examines the HTML document and requests one DNS lookup requestforeachofthe distinct hostnames intheURLsassociatedwithimage elements. Upon receiving IP addresses, each of which corresponds to the each of the distinct hostnames, the router modifies the HTML document by replacing the distinct hostnames, including their recurrences, in the URLs associated with image elements with their corresponding IP addresses. The router provides the web browser with the modified HTML document containing the IP addresses of the web servers, rather than the hostnames, in the URLs associated with image elements. The web browser can open network connections to the web servers to download the image elements in a web page without requesting a DNS lookup. In this specification and claims, the term "image element" is used as an example of the files to be downloaded for display of a web page.

23. Summary ofInvention

In an embodiment of the present invention, a method for reducing Domain Name System (DNS) lookup traffic in a computer data network in a system including a router in communication with a client computer includes the steps of receiving a DNS lookup request through a web browser when the user requests to open a particular URL. The router sends the DNS lookup request for a hostname of the web server to a DNS server and receives a corresponding IP address. The router forwards the IP address to the web browser and the web browser sends a network connection request with a file transfer request to the router. The router forwar ds the request to the web server. The web server responds to the request by sending an HTML document for the web page. Upon receiving the HTML document, the router examines the HTML document for the URLs associated with image elements to be downloaded for display of a web page and sends one DNS lookup request for each of the distinct hostnames, regardless of how many times that distinct hostname appears in the HTML document. The router receives IP addresses, each of which corresponds to one of each of the distinct hostnames and modifies the HTML document by replacing the each of the distinct hostnames, including their recurrences, in the URLs associated with the image elements with theircorresponding IP addresses.

24. Number of Claims : 20

25. Patent Status : Published Application

26. How much this invention is related with yourIDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

In describing representative embodiments of the present invention, the specification may have presented the method and/or process of the present invention as a particular sequence of steps. However, to the extent that the method or process does not rely on he particular order of teps set forth herein, the method or process should not be limited to the particular sequence of steps described. As one o ordinary skill in he art would appreciate, other sequences of steps may be possible. Therefore, the particular order of the steps set forth in the specification should not be construed as limitations on the claims. In addition, the claims directed to the method and/or process

of the present invention should not be limited to the performance of their steps in the order written, and one skilled in the art can readily appreciate that the sequences may be varied and still remain within the spirit and scope of the present invention.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Jhaveri Shail Rajivbhai**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107031_3

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	IP,LAN,Network,Wake, On, LAN
3. Search String Used	:	Wake On LAN
4. Number of Results/Hits getting	:	798

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	LAN
6 (a) : IPC class of the studied patent	:	H04B10/00; (IPC1-7): H04B10/00; H04B10/00
7. Title of Invention	:	Wake-on LAN device
8. Patent No.	:	
9. Application Number	:	10/147671
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2003/0215243.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	16/05/2002
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Booth Bradley J	Austin, TX, US

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	BOOTH BRADLEY J	USA

18. Applicant for Patent is : Individual

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

Anapparatuscomprising:anopticaltransceiver adapted to transmit data in or receive data from an optical transmission medium; and adata transceiver coupled to transmit data between the optical transceiver and a media independent interface (MII), the data transceiver comprising logic to power down at least a portion of the optical transceiver in response to detection of a power down condition.

20. Specific Problem Solved / Objective of Invention

] Environmental regulations have imposed restrictions on the rate of power consumpti on of processing platforms and networking equipment. Such equipment may transition to one or more power states as defined in the Advanced Configuration and Power Interface (ACPI) upon detecting an event or cond ition. For example, a processing platform may transition to a lower power state and resume to a full power condition upon detection of an event.

21. Brief about Invention

Reference throughout this specification to“one embodiment” or “an embodiment” means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, the appearances of the phrase “in one embodiment” or “an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in one or more embodiments.

“Machine-readable” instructions as referred to herein relates to expressions which may be understood by one or more machines for performing one or more logical operations. For example, machine -readable instructions may comprise instructions which are interpretable by a processor compiler for executing one or more operations on one or more data objects. However, this is merely an example of machine-readable instructions and embodiments of the present invention are not limited in this respect.

22. Key learning Points

A "processing system" as discussed herein relates to a combination of hardware and software resources for accomplishing computational tasks. However, this is merely an example of a processing system and embodiments of the present invention are not limited in this respect. A "host processing system" relates to a processing system which may be adapted to communicate with a "peripheral device." For example, a peripheral device may provide inputs to or receive outputs from an application process hosted on the host processing system. However, these are merely examples of a peripheral device and a host processing system, and embodiments of the present invention are not limited in these respects.

23. Summary of Invention

A "communication adapter" as referred to herein relates to a device which may be coupled to a transmission medium to transmit data to or receive data from other devices coupled to the transmission medium. For example, a communication adapter may comprise a network adapter adapted to transmit data to or receive data from devices coupled to a network such as a local area network. Such a network adapter may be communicate with the other devices according to any one of several data communication formats such as, for example, communication formats according any of the IEEE standard 802.3, asynchronous transfer mode (ATM), synchronous optical network (SONET) or synchronous digital hierarchy (SDH) standards . In alternative embodiments, a communication adapter may comprise any one of other I/O devices such as, for example, an adapter to a data storage system. However, these are merely examples of a communication adapter and embodiments of the present invention are not limited in theserespects.

24. Number of Claims **:** 32

25. Patent Status **:** Published Application

26. How much this invention is related with yourIDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Networking devices employedin processing platforms andnetworking equipment typically consume a substantial portionof the overallpower consumed bysuch systems.Additionally, these systems typically increase consumption as they incorporate networking devices for higher rates of data transmission.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Jhaveri Shail Rajivbhai**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107031_4

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	ping,IP,host
3. Search String Used	:	ping
4. Number of Results/Hits getting	:	747

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	ping
6 (a) : IPC class of the studied patent	:	H04Q9/00; G06F15/00
7. Title of Invention	:	Ping Server
8. Patent No.	:	
9. Application Number	:	13/023368
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0200426.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	02/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Diluciano Joshua Dominic Spokane Valley WA US	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Avista Corporation	WA,USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a plurality of utility devices within the utility service area to which to send an information request, based on the detected incident; interrogating one or more utility devices of the plurality of utility devices to determine a communication technology and/or a communication protocol used by the one or more utility devices; sending an information request to the plurality of utility devices using one or more communication echnologies and/or one or more communication protocols, based at least in part on he results of the interrogation; receiving results rom the one or more utility devices based on t he sending; and formulating a response to the incident based on the results of the sending.

20. Specific Problem Solved / Objective of Invention

A computer-implemented method of processing an incident n a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a first component of the utility service area to which to send an information request, based on the detected incident; determining a first communication technology and a first communication protocol used by the first component; sending an information request to the first component using the first communication technology and the first communication protocol; selecting, by the one or more processors, one or more subsequent components of the utility service area o which to send an information request, the selecting based at least in part on an algorithm; discovering one or more subsequent communication technologies and/or one or more subsequent communication protocols used by the one or more subsequent components; adjusting the algorithm based on the discovering; sending one or more information requests to the one or more subsequent componentsusingtheoneormoresubsequent communication technologies and the one or more subsequent communication protocols; receiving results from the one or more subsequent components based on the sending; and initiating a response to the incident based on the received results.

21. Brief about Invention

As part of automating their processes, some utilities and other service providers have employed end point devices (such as meters, for example) with an ability to communicate to a mobile or fixed hub or collector. Many of these endpointdevicesareconfiguredto broadcast usage information, and the like, to the hub,usingone-way communication (e.g., Automatic Meter Reading (AMR)). Some "smart" end point devices, however, are also able to receive and respond to limited inquiries from a hub device. Many of the end point devices (and hubs) capable of one-way or two-way communication transfer messages using particular technologies and/or proprietary communication protocols. For example, some devices may communicate via power line carrier while others may use wireless technologies such as cellular, Wireless Fidelity (Wi-Fi™), or the like. Consequently, utilities may use multiple different communication technologies and/or protocols across their service areas due to upgrades, expansions, and the like, occurring over the years. Integration of such a heterogeneous network of devices and communication systems can add layers of difficulty to a comprehensive communication scheme, and thus, complicate an effort to automate the diagnosis of power problems within the service area.

22. Key learning Points

Some utilities and service providers use an intelligent map system to track service calls. For example, when a customer calls in an event (e.g., a power outage, etc.), service personnel may change an attribute associated with an asset connected to the event (such as a meter, transformer, service point, etc.). Changing the attribute may then result in the asset being displayed in a different manner on the map, thereby marking the location of the event on the map. Multiple calls from customers may result in a pattern of marked assets that can help target a physical location to investigate when diagnosing a service area problem. Since such a system re lies on customer reports, however, it may not be timely or accurate. For example, customers may not report an event or they may report it inaccurately. Even with accurate reporting, such a system may have limitations. For example, such a system still 1) is labor and time intensive; 2) is reactive rather than proactive, possibly resulting in delays in service restoration; and 3) does not provide for verification of service restoration, since most customers do not call a service provider to report a restoration ofservice.

23. Summary of Invention

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

This application describes techniques to assist in predicting, diagnosing, and/or managing an incident in a utility service area.

In one aspect, an outage management method includes detecting an incident in a hierarchal service area. At least one node (e.g., station, device, equipment, etc.) of the service area is identified as being associated with the incident. A preset quantity of nodes of the service area is selected for communication, based on the hierarchy of the system and/or a physical location of the node(s). The selection of nodes may also be made according to an algorithm, which may be adjusted based on various factors of the incident and/or the service area. The preset quantity of nodes is pinged, with the results of the pinging used to determine an appropriate response to the incident.Thedeterminedresponsemaythen be initiated. In some aspects, the pinging includes requesting information from the nodes and/or two-way communication between the nodes and a communication system.

24. Number of Claims : 36

25. Patent Status : Published Application

26. How much this invention is related with yourIDP/UDP?

71 to 90%

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Whilevariousdiscreetembodiments have been described throughout,the individual features ofthe various embodimentsmaybecombinedto form other embodiments notspecifically described. The embodiments formed by combining the features of described embodiments are also outage management systems.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 26/10/2015

Dear **Patel Parth Ashokbhai**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107032_1

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	IP,LAN,Network,Wake, On, LAN
3. Search String Used	:	Wake On LAN
4. Number of Results/Hits getting	:	798

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	LAN
6 (a) : IPC class of the studied patent	:	H04B10/00; (IPC1-7): H04B10/00;H04B10/00
7. Title of Invention	:	Wake-on LAN device
8. Patent No.	:	
9. Application Number	:	10/147671
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2003/0215243.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	16/05/2002
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Booth Bradley J	Austin, TX, US

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	BOOTH BRADLEY J	USA

18. Applicant for Patent is : Individual

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

An apparatus comprising: an optical transceiver adapted to transmit data in or receive data from an optical transmission medium; and a data transceiver coupled to transmit data between the optical transceiver and a media independent interface (MII), the data transceiver comprising logic to power down at least a portion of the optical transceiver in response to detection of a power down condition.

20. Specific Problem Solved / Objective of Invention

] Environmental regulations have imposed restrictions on the rate of power consumpt ion of processing platforms and networking equipment. Such equipment may transition to one or more power states as defined in the Advanced Configuration and Power Interface (ACPI) upon detecting an event or cond ition. For example, a processing platform may transition to a lower power state and resume to a full power condition upon d etection of an event.

21. Briefabout Invention

Reference throughout this specification to“one embodiment” or “an embodiment” means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, the appearances of the phrase “in one embodiment” or “an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in one or more embodiments.

“Machine-readable” instructions as referred to herein relates to expressions which may be understood by one or more machines for performing one or more logical operations. For example, machine-readable instructions may comprise instructions which are interpretable by a processor compiler for executing one or more operations on one or more data objects. However, this is merely an example of machine-readable instructions and embodiments of the present invention are not limited in this respect.

22. Key learning Points

A "processing system" as discussed herein relates to a combination of hardware and software resources for accomplishing computational tasks. However, this is merely an example of a processing system and embodiments of the present invention are not limited in this respect. A "host processing system" relates to a p rocessing system which may be adapted to communicate with a "peripheral device." For example, a peripheral device may provide inputs to or receive outputs from an application process hosted on the host processing system. However, these are merely examples of a peripheral device and a host processing system, and embodiments of the present invention are not limited in theserespects.

23. Summary ofInvention

A "communication adapter" as referred to herein relates to a device which may be cou pled to a transmission medium to transmit data to or receive data from other devices coupled to the trans mission medium. For example, a communication adapter may comprise a network adapter adapted to transmit data to or receive data from devices coupled to a network such as a local area network. Such a network adapter may be communic ate with the other devices according to any one of several data communication formats such as, for example, communication formats according any of the IEEE standard 802.3, asynchronous transfer mode (ATM), sy nchronous optical network (SONET) or synchronous digital hierarchy (SDH) standards. In alternative embodiments, a communication adapter may comprise any one of other I/O devices such as, for example, an adapter to a data storage system. However, these are merely examples of a communication adapter and embodiments of the present invention are not limited in thesespects.

24. Number of Claims : 32

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Networking devices employed in processing platforms and networking equipment typically consume a substantial portion of the overall power consumed by such systems. Additionally, these systems typically increase consumption as they incorporate networking devices for higher rates of data transmission.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 26/10/2015

Dear **Patel Parth Ashokbhai**,

Studied Patent Number for generationof PSAR	:	15BE7_120280107032_2

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	ping,IP,host
3. Search String Used	:	ping
4. Number of Results/Hits getting	:	747

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	ping
6 (a) : IPC class of the studied patent	:	H04Q9/00; G06F15/00
7. Title of Invention	:	Ping Server
8. Patent No.	:	
9. Application Number	:	13/023368
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0200426.htm
10. Dateof Filing/Application (DD/MM/YYYY)	:	02/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Diluciano Joshua Dominic Spokane Valley WA US	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Avista Corporation	WA,USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a plurality of utility devices within the utility service area to wh ich to send an information request, based on the detected incident; interrogating one or more utility devices of the plurality of utility devices to determine a communication technology and/or a communication protocol used by the one or more utility devices; sending an information request to the plurality of utility devices using one or more communication technologies and/or one or more communication protocols, based at least in part on the results of the interrogation; receiving results from the one or more utility devices based on the sending; and formulating a response to the incident based on the results of thesending.

20. Specific Problem Solved / Objective of Invention

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the inc ident in the utility service area; identifying a first component of the utility service area to which to send an information request, based on the detected incident; determining a first communication technology and a first communication protocol used by the first component; sending an information request to the first component using the first communication technology and the first communication protocol; selecting, by the one or more processors, one or more subsequent components of the utility service area to which to send an information requ est, the selecting based at least in part on an algorithm; discovering one or more subsequent communication technologies and/or one or more subsequent communication protocols used by the one or more subsequent components; adjusting the algorithm based on the discovering; sending one or more information requests to the one or more subsequent components using the one or more subsequent communication technologies and the one or more subsequent communication protocols; receiving results from the one or more subsequent components based on the sending; and initiating a response to the incident based on the received results.

21. Briefabout Invention

As part of automating their processes, some utilities and other service providers have employed end point devices (such as meters, for example) with an ability to communicate to a mobile or fixed hub or collector. Many of these end point devices are configured to broadcast usage information, and the like, to the hub, using one-way communication (e.g., Automatic Meter Reading (AMR)). Some "smart" end point devices, however, are also able to receive and respond to limited inquiries from a hub device. Many of the end point devices (and hubs) capable of one-way or two-way communication transfer messages using particular technologies and/ or proprietary communication protocols. For example, some devices may communicate via power line carrier while others may use wireless technologies such as cellular, Wireless Fidelity (Wi-Fi™), or the like. Consequently, utilities may use multiple different communication technologies and/or protocols across their service areas due to upgrades, expansions, and the like, occurring over the years. Integration of such a heterogeneous network of devices and communication systems can add layers of difficulty to a comprehensive communication scheme, and thus, complicate an effort to automate the diagnosis of power problems within the service area.

22. Key learning Points

Some utilities and service providers use an intelligent map system to track service ca lls. For example, when a customer calls in an event (e.g., a power outage, etc.), service personnel may change an attribute associated with an asset connected to the event (such as a meter, transformer, service point, etc.). Changing the attribute may then result in the asset being displayed in a different manner on the map, thereby marking the location of the event on the map. Multiple calls from customers may result in a pattern of marked assets that c an help target a physical location to investigate when diagnosing a service area problem. Since such a system relies on customer reports, however, it may not be timely or accurate. For example, customers may not report an event or they may report it inaccurately. Even with accurate reporting, such a system may have limitations. For example, such a system still 1) is labor and time intensive; 2) is reactive rather than proactive, possibly resulting in delays in service restoration; and 3) does not provide for verification of service restoration, since most customers do not call a service provider to report a restoration of service.

23. Summary of Invention

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

This application describes techniques to assist in predicting, diagnosing, and/or managing an incident in a utility service area.

In one aspect, an outage management method includes detecting an incident in a hierarc hal service area. At least one node (e.g., station, device, equipment, etc.) of the service area is identified as being associated with the incident. A preset quantity of nodes of the service area is selected for communicatio n, based on the hierarchy of the system and/or a physical location of the node(s). The selection of nodes may also be made according to an algorithm, which may be adjusted based on various factors of the incident and/or the service area. The preset quantity of nodes is pinged, with the results of the pinging used to determine an appropriate response to the incident. The determined response may then be initiated. In some aspects, the pinging includes requesting information from the nodes and/or two-way communication between the nodes and a communication system.

24. Number of Claims : 36

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

71 to 90%

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

While various discreet embodiments have been described throughout, the individual features of the various embodiments may be combined to form other embodiments not specifically described. The embodiments formed by combining the features of described embodiments are also outage management systems.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 26/10/2015

Dear **Patel Parth Ashokbhai**,

Studied Patent Number for generation of PSAR : 15BE7_120280107032_3

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	network,discovery,IP
3. Search String Used	:	Network Discovery
4. Number of Results/Hits getting	:	784

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	Networking
6 (a) : IPC class of the studied patent	:	G06F15/16
7. Title of Invention	:	NETWORK DISCOVERY ANDSELECTION
8. Patent No.	:	
9. Application Number	:	12/993862
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2011/0072101.htm
10. Dateof Filing/Application (DD/MM/YYYY)	:	06/04/2008
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	United States

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Forssell Mika Soderkulla FI Tettinen Velima	Finland

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	NOKIA SIEMENS NETWORKS OY	Finland

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

There is a drawback in the above-mentioned approaches in that only policies, preferences and general network information for discovery and selection of neighboring (access) networks are provided. This means that based on thus provided information a device may be able to differentiate as to which of the networks should be prioritized over the other networks, when selecting a target access network to be used for connectivity. However, usually no information on how to access such discovered (access and/or service) networks is available at the device. Depending on the underlying network environment, such information may for example comprise WLAN security settings, e.g. WEP/WPA keys, and a HTTP (Hyper-Text Transfer Protocol) password or WLAN and VoIP (Voice over Internet Protocol)settings.

20. Specific Problem Solved / Objective of Invention

A method comprising: sending a network discovery request to a network element; receiving a network discovery message comprising information on discovered networks from said network element; receiving communication settings for at least one of discovered networks from said network element; and configuring in accordance with the received communication settings for accessing at least one of the discovered networks.

21. Briefabout Invention

Recently, there is a trend in the field of communication that more networks, more network technologies and more service providers emerge. This trend leads to increasingly heterogeneous network environments. In such heterogeneous network environments, there is among others a need for convergence, interworking and handover measures. In this regard, measures are required, which enable a device such as a terminal or user equipment to discover, select and access at lest one network which is preferred and/or trusted and/or suitable for accessing, e.g. when a certain service is desired. A network to be discovered and selected may e.g. be an access network operating with a network technology such as for example GSM (Global System for Mobile Communication), GPRS (General Packet Radio Service), WCDMA (Wideband Code Division Multiple Access), HSPA (High Speed Packet Access), LTE (Long-term Evolution), WiMAX (Worldwide Interoperability for Microwave Access), WLAN (Wireless

Local Area Network), and femtocells.

For example, the Institute of Electrical and Electronics Engineers (IEEE) has specified a standard called IEEE 802.21 for providing media-independent handover (MIH) to address such needs. Also, the Third Generation Partnership Project (3GPP) has specified an access network discovery and selection function (ANDSF) to address such needs. These approaches address the above needs by providing preferences and policies to devices, which assist the devices and their users to select preferred and trusted networks for accessing certain services. Both IEEE 802.21 and 3GPP ANDSF allow devices to request information about neighboring networks, i.e. coexisting/surrounding (access) networks within reach, to know which one or more of the networks are preferred, trusted and/or suitable for different services. This information may include e.g. network operator name, operator (roaming) partners, used frequencies, cost information etc. Further, the following information may be provided about (access) networks: a prioritized network list for using the networks, network name and/or type, service provider, cost of using the networks, and other policy parameters related to network selection and discovery, for example “Don't use Technology A, like WLAN, if other alternatives are available”. This makes efficient use of coexisting/surrounding networks as networks are discovered and used. Hence, both approaches are for bringing neighboring networks to device/subscriber's attention, and may in general terms be referred to as “network discovery”.

22. Key learning Points

Generally, for the purpose of the present invention as described herein above, it should be noted that

an access technology may be any technology by means of which a user equipment can access an access network (e.g. via a base station or generally an access node). Any present or future technology, such as WLAN (Wireless Local Access Network), WiMAX (Worldwide Interoperability for Microwave Access), BlueTooth, Infrared, and the like may be used; although the above technologies are mostly wireless access technologies, e.g. in different radio spectra, access technology in the sense of the present invention may also imply wirebound technologies, e.g. IP based access technologies like cable networks or fixed lines but also circuits switched access technologies; access technologies may be distinguishable in at least two categories or access domains such as packet switched and circuit switched, but the existence of more than two access domains does not impede the invention being applied thereto,

an access network may be any device, apparatus, unit or means by which a station, entity or other user equipment may connect to and/or utilize services offered by the access network; such services include, among others, data and/or (audio-) visual communication, data download etc.;

a user equipment may be any device, apparatus, unit or means by which a system user may experience services from an access network such as a mobile phone, personal digital assistant PDA, or computer;

method steps likely to be implemented as software code portions and being run using a processor at a network element or terminal (as examples of devices, apparatuses and/or modules thereof, or as examples of entities including apparatuses and/or modules therefor), are software code independent and can be specified using any known or future developed programming language as long as the functionality defined by the method steps is preserved;

generally, any method step is suitable to be implemented as software or by hardware without changing the idea of the invention in terms of the functionality implemented.

23. Summary of Invention

According to one exemplary aspect of the present invention, there is provided a method comprising discovering networks being available for a device, and providing communication settings for at least one of discovered networks to the device.

According to further developments or modifications thereof, one or more of the following applies:

the network discovery is initiated by the device,

the method further comprises receiving a request for communication settings for at least one of discovered networks from the device, and causing communication settings provision for the requested communication settings,

the communication settings provision is effected by network discovery functionality, and comprises including the requested communication settings in a network discovery message, and transmitting the network discovery message including the requested communication settings to the device,

the communication settings provision is effected by device management functionality, and comprises triggering device management operation, and supplying a configuration of the requested communication settings on the basis of the triggered device management operation to the device,

the network discovery is initiated at a network.

24. Number of Claims : 79

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

There is e.g. provided network discovery comprises discovering networks being available for a device and automatically providing communication settings for at least one of discovered networks to the device. The network discovery may be device-initiated or network-initiated. The communication settings provision may be effected by network discovery functionality or another functionality such as device management functionality. The thus provided communication settings may be related to an access network or to an operator network.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 26/10/2015

Dear **Patel Parth Ashokbhai**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107032_4

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	Socket,Connections,Programming
3. Search String Used	:	Socket Connections
4. Number of Results/Hits getting	:	748

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	Socket
6 (a) : IPC class of the studied patent	:	G06F15/16; H04L29/06
7. Title of Invention	:	Managing and checking socketconnections
8. Patent No.	:	
9. Application Number	:	11/025899
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2006/0020705.htm
10. Dateof Filing/Application (DD/MM/YYYY)	:	01/03/2005
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Paek Seunghak	Seongnam-si, KR

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Robert Bushnell E	WA,USA

18. Applicant for Patent is : Individual

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

A system comprising: at least one application program module adapted to create a socket necessary to communicate with a server or a client and to call an Application Program Interface (API) to check a socket connection of the created socket to manage the created socket; a common library module containing a program adapted to perform an operation set in the called API upon the API being called from the application program module; and a socket check execution module, created by executing the coded program in the common library module, and adapted to periodically check the socket connection of the created socket.

20. Specific Problem Solved / Objective of Invention

The system, wherein the common library module includes at least one of: a program a dapted to perform a function defined to correspond to a call of a server initialization API to create the socket check execution module; a program adapted to perform a function defined to correspond to a call of a server registration API to r egister a socket in the created socket check execution module to check a certain socket connection; a program adapted to perform a function defined to correspond to a call of a server registration cancel API to cancel reg istration of the socket registered in the socket check execution module and whose socket connection is being checked; a program adapted to perform a function defined to correspond to a call of a server process API to process a socket check message received from the client; and a program adapted to perform a function defined to correspond to a call of a server release API to release registration of all socket registered in the socket check execution module and the socket check executionmodule.

21. Briefabout Invention

The present invention relates to socket management between a server and a client. More particularly, the present invention relates to a system adapted to manage and check a socket connections between servers or equipment having Berkeley Software Distribution (BSD)-based, Unix-based, or Linux-based operating systems and to disconnect or reconnect socket connections when an abnormal connection occurs.

22. Key learning Points

Servers or equipment having BSD-based, Unix-based, or Linux-based operating systems (OSs) have several application programs which are executed therein. The application programs generally use a connection-oriented protocol such as the Transmission Control Protocol (TCP) to perform communication therebetween. The TCP is a connection-oriented protocol which is reliable and provides full-duplex communication and a continuous stream of bytes. The TCP provides an error check function, a retransmission function and a stream control function for the reliable transmission of data. Thus, the application programs which are executed in the servers and the equipment recognizes a connection therebetween according to the TCP protocol, and transmits/receives messages to/from each other using the connection.

Most operating systems employ a socket as an interface for a connection-oriented protocol, and the respective application programs manage sockets necessary for respective connections.

23. Summary of Invention

According to one aspect of the invention, a system for managing socket connections includes: at least one application program module adapted to create a socket necessary to communicate with a server or a client and to call an Application Program Interface (API) to check a socket connection of the created socket to manage the created socket; a common library module containing a program adapted to perform an operation set in the called API upon the API being called from the application program module; and a socket check execution module, created by executing the coded program in the common library module, and adapted to periodically check the socket connection of the created socket.

According to another aspect of the invention, a method of checking socket connections includes: creating a certain socket by driving an application program module programmed to create and manage the socket necessary to communicate with one of a server and a client; the application program module calli ng an Application Program Interface (API) defined to check a socket connection of the created socket; a common library mod ule executing a program to perform an operation set in the called API upon the API being called by the application program module; and a socket check execution mode, created by executing the program in the common library module, periodically checking a socket connection of the created socket.

24. Number of Claims : 21

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

The forgoing embodiment is merely exemplary and is not to be construed as limiting the present invention. The present teachings can be readily applied to other types of apparatus. The description of the present invention is intended to be illustrative, and not to limit the scope of the claims. Many alterna tives, modifications, and variations will be apparent to those skilled in the art.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 26/10/2015

Dear **Bhatt Shrey Keyur**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107033_1

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	network,discovery,IP
3. Search String Used	:	Network Discovery
4. Number of Results/Hits getting	:	784

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	Networking
6 (a) : IPC class of the studied patent	:	G06F15/16
7. Title of Invention	:	NETWORK DISCOVERY AND SELECTION
8. Patent No.	:	
9. Application Number	:	12/993862
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2011/0072101.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	06/04/2008
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	United States

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Forssell Mika Soderkulla FI Tettinen Velima	Finland

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	NOKIA SIEMENS NETWORKS OY	Finland

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

There is a drawback in the above-mentioned approaches in that only policies, preferences and general network information for discovery and selection of neighboring (access) networks are provided. This means that based on thus provided information a device may be able to differentiate as to which of the networks should be prioritized over the other networks, when selecting a target access network to be used for connectivity. However, usually no information on how to access such discovered (access and/or service) networks is available at the device. Depending on the underlying network environment, such information may for example comprise WLAN security settings, e.g. WEP/WPA keys, and a HTTP (Hyper-Text Transfer Protocol) password or WLAN and VoIP (Voice over Internet Protocol) settings.

20. Specific Problem Solved / Objective of Invention

A method comprising: sending a network discovery request to a network element; receiving a network discovery message comprising information on discovered networks from said network element; receiving communication settings for at least one of discovered networks from said network element; and configuring in accordance with the received communication settings for accessing at least one of the discovered networks.

21. Brief about Invention

Recently, there is a trend in the field of communication that more networks, more network technologies and more service providers emerge. This trend leads to increasingly heterogeneous network environments. In such heterogeneous network environments, there is among others a need for convergence, interworking and handover measures. In this regard, measures are required, which enable a device such as a terminal or user equipment to discover, select and access at lest one network which is preferred and/or trusted and/or suitable for accessing, e.g. when a certain service is desired. A network to be discovered and selected may e.g. be an access network operating with a network technology such as for example GSM (Global System for Mobile Communication), GPRS (General Packet Radio Service), WCDMA (Wideband Code Division Multiple Access), HSPA (High Speed Packet Access), LTE (Long-term Evolution), WiMAX (Worldwide Interoperability for Microwave Access), WLAN (Wireless

Local Area Network), and femtocells.

For example, the Institute of Electrical and Electronics Engineers (IEEE) has specified a standard called IEEE 802.21 for providing media-independent handover (MIH) to address such needs. Also, the Third Generation Partnership Project (3GPP) has specified an access network discovery and selection function (ANDSF) to address such needs. These approaches address the above needs by providing preferences and policies to devices, which assist the devices and their users to select preferred and trusted networks for accessing certain services. Both IEEE 802.21 and 3GPP ANDSF allow devices to request information about neighboring networks, i.e. coexisting/surrounding (access) networks within reach, to know which one or more of the networks are preferred, trusted and/or suitable for different services. This information may include e.g. network operator name, operator (roaming) partners, used frequencies, cost information etc. Further, the following information may be provided about (access) networks: a prioritized network list for using the networks, network name and/or type, service provider, cost of using the networks, and other policy parameters related to network se lection and discovery, for example “Don't use Technology A, like WLAN, if other alternatives are available”. This makes efficient use of coexisting/surrounding networks as networks are discovered and used. Hence, both approaches are for bringing neighboring networks to device/subscriber's attention, and may in general terms be referred to as “network discovery”.

22. Key learning Points

Generally, for the purpose of the present invention as described herein above, it should be noted that

an access technology may be any technology by means of which a user equipment can access an access network (e.g. via a base station or generally an access node). Any present or future technology, such as WLAN (Wireless Local Access Network), WiMAX (Worldwide Interoperability for Microwave Access), BlueTooth, Infrared, and the like may be used; although the above technologies are mostly wireless access technologies, e.g. in different radio spectra, access technology in the sense of the present invention may also imply wirebound technologies, e.g. IP based access technologies like cable networks or fixed lines but also circuits switched access technologies; access technologies may be distinguishable in at least two categories or access domains such as packet switched and circuit switched, but the existence of more than two access domains does not impede the invention being applied thereto,

an access network may be any device, apparatus, unit or means by which a station, entity or other user equipment may connect to and/or utilize services offered by the access network; such services include, among others, data and/or (audio-) visual communication, data download etc.;

a user equipment may be any device, apparatus, unit or means by which a system user may experience services from an access network such as a mobile phone, personal digital assistant PDA, or computer;

method steps likely to be implemented as software code portions and being run using a processor at a network element or terminal (as examples of devices, apparatuses and/or modules thereof, or as examples of entities including apparatuses and/or modules therefor), are software code independent and can be specified using any known or future developed programming language as long as the functionality defined by the method steps is preserved;

generally, any method step is suitable to be implemented as software or by hardware without changing the idea of the invention in terms of the functionality implemented.

23. Summary of Invention

According to one exemplary aspect of the present invention, there is provided a method comprising discovering networks being available for a device, and providing communication settings for at least one of discovered networks to the device.

According to further developments or modifications thereof, one or more of the following applies:

the network discovery is initiated by the device,

the method further comprises receiving a request for communication settings for at least one of discovered networks from the device, and causing communication settings provision for the requested communication settings,

the communication settings provision is effected by network discovery functionality, and comprises including the requested communication settings in a network discovery message, and transmitting the network discovery message including the requested communication settings to the device,

the communication settings provision is effected by device management functionality, and comprises triggering device management operation, and supplying a configuration of the requested communication settings on the basis of the triggered device management operation to the device,

the network discovery is initiated at a network.

24. Number of Claims : 79

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

There is e.g. provided network discovery comprises discovering networks being available for a device and automatically providing communication settings for at least one of discovered networks to the device. The network discovery may be device-initiated or network-initiated. The communication settings provision may be effected by network discovery functionality or another functionality such as device management functionality. The thus provided communication settings may be related to an access network or to an operator network.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Bhatt Shrey Keyur**,

Studied Patent Number for generation of PSAR : 15BE7_120280107033_2

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	DNS,Lookup,Reverse
3. Search String Used	:	DNS Lookup
4. Number of Results/Hits getting	:	981

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	DNS
6 (a) : IPC class of the studied patent	:	G06F15/16
7. Title of Invention	:	Reducing DNS Lookups
8. Patent No.	:	
9. Application Number	:	13/213131
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0036227.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	19/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Kleinfelter Kevin P Atlanta GA US Littrell	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	ATT Intellectual Property I LP	USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

As known in the art, computers connected to the Internet use the well-known transmission control protocol/internet protocol (TCP/IP) to negotiate the network communications with other computers on the network. TCP/IP network packets are transmitted to other computers using an IP address to identify the source and destination computers. An IP address is currently defined as a 32-bit number which is generally expressed as four octets (converted to their decimal values) separated by a period, for example, 12.34.56.78. Due to the very large number of computers connected to the Internet, it would not be convenient for the users to memorize the IP address assigned to each of the computers being accessed. Accordingly, a Domain Name System (DNS) was implemented whereby a computer may be identified by a mnemonic host name, such as www.whitehouse.gov.

20. Specific Problem Solved / Objective of Invention

A method, comprising: receiving a file from a server in response to an initial request by a client, the file including multiple universal resource locators containing a hostname; identifying an Internet Protocol address associated with the hostname; creating a modified file including replacing each occurrence of the hostname with the Internet Protocol address for each universal resource locator containing the hostname within the file; and providing the modified file to the client in response to the initial request.

21. Brief about Invention

DNS is a name resolution method that allows the users and applications to initiate network communications with a hostname, without an IP address, for other computers on the network. The DNS server maintains a database of hostnames and their corresponding IP addresses. The users can open a web page on his or her web browser by directing the application to connect to a particular universal resource location (URL) which identifies the web server and the particular document to be downloaded to the browser. When the sending computer or application needs to open a network connection to another computer, it first contacts a DNS server to resolve the other computer's hostname to its IP address. DNS servers are distributed throughout the Internet. DNS servers communicate with other DNS servers to resolve a network address.

The standard convention for a URL is 'protocol://host's name/name of file.' The protocol includes, for example, FTP (file transfer protocol), telnet and HTTP (hypertext transfer protocol). Typically, HTTP is used to transfer information (also referred to as "content") from a web server application for display by web browser (a web client computer application). HTTP is the set of rules for exchanging files, for example, text, graphic images, sound, and video, in the Internet. Content is generally organized into groups of data, referred to as a "web page," defined in documents downloaded from the web server to the browser. The web page is a text file that contains text and a set of HTML (hyper text markup language) tags that describe how the text should be formatted when a browser displays the web page for the user.

22. Key learning Points

In the present invention, a router intercepts the incoming HTML document and rewrites the HTML document before sending it to a web browser. The router examines the HTML document and re quests one DNS lookup request for each of the distinct hostnames in the URLs associated with image elements. Upon receiving IP addresses, each of which corresponds to the each of the distinct hostnames, the rout er modifies the HTML document by replacing the distinct hostnames, including their recurrences, in the URLs associated with image elements with their corresponding IP addresses. The router provides the web browser with the modified HTML document containing the IP addresses of the web servers, rather than the hostnames, in the URLs associated with image elements. The web browser can open network connections to the web servers to download the image elements in a web page without requesting a DNS lookup. In this specification and claims, the term "image element" is used as an example of the files to be downloaded for display of a web page.

23. Summary of Invention

In an embodiment of the present invention, a method for reducing Domain Name System (DNS) lookup traffic in a computer data network in a system including a router in communication with a client computer includes the steps of receiving a DNS lookup request through a web browser when the user requests to open a particular URL. The router sends the DNS lookup request for a hostname of the web server to a DNS server and receives a corresponding IP address. The router forwards the IP address to the web browser and the web browser sends a network connection request with a file transfer request to the router. The router forwards the request to the web server. The web server responds to the request by sending an HTML document for the web page. Upon receiving the HTML document, the router examines the HTML document for the URLs associated with image elements to be downloaded for display of a web page and sends one DNS lookup request for each of the distinct hostnames, regardless of how many times that distinct hostname appears in the HTML document. The router receives IP addresses, each of which corresponds to one of each of the distinct hostnames and modifies the HTML document by replacing the each of the distinct hostnames, including their recurrences, in the URLs associated with the image elements with their corresponding IP addresses.

24. Number of Claims : 20

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

In describing representative embodiments of the present invention, the specification may have presented the method and/or process of the present invention as a particular sequence of steps. However, to the extent that the method or process does not rely on the particular order of steps set forth herein, the method or process should not be limited to the particular sequence of steps described. As one of ordinary skill in the art would appreciate, other sequences of steps may be possible. Therefore, the particular order of the steps set forth in the specification should not be construed as limitations on the claims. In addition, the claims directed to the method and/or process

of the present invention should not be limited to the performance of their steps in the order written, and one skilled in the art can readily appreciate that the sequences may be varied and still remain within the spirit and scope of the present invention.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Bhatt Shrey Keyur**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107033_3

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	IP,LAN,Network,Wake, On, LAN
3. Search String Used	:	Wake On LAN
4. Number of Results/Hits getting	:	798

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	LAN
6 (a) : IPC class of the studied patent	:	H04B10/00; (IPC1-7): H04B10/00; H04B10/00
7. Title of Invention	:	Wake-on LAN device
8. Patent No.	:	
9. Application Number	:	10/147671
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2003/0215243.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	16/05/2002
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Booth Bradley J	Austin, TX, US

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	BOOTH BRADLEY J	USA

18. Applicant for Patent is : Individual

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

An apparatus comprising: an optical transceiver adapted to transmit data in or receive data from an optical transmission medium; and a data transceiver coupled to transmit data between the optical transceiver and a media independent interface (MII), the data transceiver comprising logic to power down at least a portion of the optical transceiver in response to detection of a power down condition.

20. Specific Problem Solved / Objective of Invention

] Environmental regulations have imposed restrictions on the rate of power consumption of processing platforms and networking equipment. Such equipment may transition to one or more power states as defined in the Advanced Configuration and Power Interface (ACPI) upon detecting an event or condition. For example, a processing platform may transition to a lower power state and resume to a full power condition upon detection of an event.

21. Brief about Invention

Reference throughout this specification to“one embodiment” or “an embodiment” means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, the appearances of the phrase “in one embodiment” or “an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment. Furthermore, the particular features, structures, or characteristics may be combined in one or more embodiments.

“Machine-readable” instructions as referred to herein relates to expressions which may be understood by one or more machines for performing one or more logical operations. For example, machine-readable instructions may comprise instructions which are interpretable by a processor compiler for executing one or more operations on one or more data objects. However, this is merely an example of machine-readable instructions and embodiments of the present invention are not limited in this respect.

22. Key learning Points

A "processing system" as discussed herein relates to a combination of hardware and software resources for accomplishing computational tasks. However, this is merely an example of a processing system and embodiments of the present invention are not limited in this respect. A "host processing system" relates to a processing system which may be adapted to communicate with a "peripheral device." For example, a peripheral device may provide inputs to or receive outputs from an application process hosted on the host processing system. However, these are merely examples of a peripheral device and a host processing system, and embodiments of the present invention are not limited in these respects.

23. Summary of Invention

A "communication adapter" as referred to herein relates to a device which may be coupled to a transmission medium to transmit data to or receive data from other devices coupled to the transmission medium. For example, a communication adapter may comprise a network adapter adapted to transmit data to or receive data from devices coupled to a network such as a local area network. Such a network adapter may be communicate with the other devices according to any one of several data communication formats such as, for example, communication formats according any of the IEEE standard 802.3, asynchronous transfer mode (ATM), synchronous optical network (SONET) or synchronous digital hierarchy (SDH) standards. In alternative embodiments, a communication adapter may comprise any one of other I/O devices such as, for example, an adapter to a data storage system. However, these are merely examples of a communication adapter and embodiments of the present invention are not limited in these respects.

24. Number of Claims : 32

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

< 70 %

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

Networking devices employed in processing platforms and networking equipment typically consume a substantial portion of the overall power consumed by such systems. Additionally, these systems typically increase consumption as they incorporate networking devices for higher rates of data transmission.

GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

GTU INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report(PSAR)

Date of Submission : 27/10/2015

Dear **Bhatt Shrey Keyur**,

Studied Patent Number for generation of PSAR	:	15BE7_120280107033_4

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Free Patents Online
Web link of database	:	http://www.freepatentsonline.com/
2. Keywords Used for Search	:	ping,IP,host
3. Search String Used	:	ping
4. Number of Results/Hits getting	:	747

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	Computer/IT Engineering
6. Invention is Related to/Class of Invention	:	ping
6 (a) : IPC class of the studied patent	:	H04Q9/00; G06F15/00
7. Title of Invention	:	Ping Server
8. Patent No.	:	
9. Application Number	:	13/023368
9 (a) : Web link of the studied patent	:	http://www.freepatentsonline.com/y2012/0200426.htm
10. Date of Filing/Application (DD/MM/YYYY)	:	02/08/2011
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country	:	

15. Also Publishedas

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Diluciano Joshua Dominic Spokane Valley WA US	USA

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Avista Corporation	WA,USA

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

A computer-implemented method of processing an incident in a utility service area, the method com prising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a plurality of utility devices within the utility service area to which to send an information request, based on the detected incident; interrogating one or more utility devices of the plurality of utility devices to determine a communication technology and/or a communication protocol used by the one or more utility devices; sending an information request to the plurality of utility devices using one or more communication technologies and/or one or more communication protocols, based at least in part on the results of the interrogation; receiving results from the one or more utility devices based on the sending; and formulating a response to the incident based on the results of thesending.

20. Specific Problem Solved / Objective of Invention

A computer-implemented method of processing an incident in a utility service area, the method comprising: under control of one or more processors configured with executable instructions: detecting the incident in the utility service area; identifying a first component of the utility service area to which to send an information request, based on the detected incident; determining a first communication technology and a first communication protocol used by the first component; sending an information request to the first component using the first communication technology and the first communication protocol; selecting, by the one or more processors, one or more subsequent components of the utility service area to which to send an information request, the selecting based at least in part on an algorithm; discovering one or more subsequent communication t echnologies and/or one or more subsequent communication protocols used by the one or more subsequent components; adjusting the algorithm based on the discovering; sending one or more information requests to the one or more subsequent components using the one or more subsequent communication technologies and the one or more subsequent communication protocols; receiving results from the one or more subsequent components based on the sending; and initiating a response to the incident based on the received results.

21. Briefabout Invention

As part of automating their processes, some utilities and other service providers have employed end point devices (such as meters, for example) with an ability to communicate to a mobile or fixed hub or collector. Many of these end point devices are configured to broadcast usage information, and the like, to the hub, using one-way communication (e.g., Automatic Meter Reading (AMR)). Some "smart" end point devices, however, are also able to receive and respond to limited inquiries from a hub device. Many of the end point devices (and hubs) capable of one-way or two-way communication transfer messages using particular technologies and/ or proprietary communication protocols. For example, some devices may communicate via power line carrier while others may use wireless technologies such as cellular, Wireless Fidelity (Wi-Fi™), or the like. Consequently, utilities may use multiple different communication technologies and/or protocols across their service areas due to upgrades, expansions, and the like, occurring over the years. Integration of such a heterogeneous network of devices and communication systems can add layers of difficulty to a comprehensive communication scheme, and thus, complicate an effort to automate the diagnosis of power problems within the service area.

22. Key learning Points

Some utilities and service providers use an intelligent map system to track service ca lls. For example, when a customer calls in an event (e.g., a power outage, etc.), service personnel may change an attribute associated with an asset connected to the event (such as a meter, transformer, service point, etc.). Changing the attribute may then result in the asset being displayed in a different manner on the map, thereby marking the location of the event on the map. Multiple calls from customers may result in a pattern of marked assets that can help target a physical location to investigate when diagnosing a service area problem. Since such a system relies on customer reports, however, it may not be timely or accurate. For example, customers may not report an event or they may report it inaccurately. Even with accurate reporting, such a system may have limitations. For example, such a system still 1) is labor and time intensive; 2) is reactive rather than proactive, possibly resulting in delays in service restoration; and 3) does not provide for verification of service restoration, since most customers do not call a service provider to report a restoration of service.

23. Summary of Invention

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

This application describes techniques to assist in predicting, diagnosing, and/or managing an incident in a utility service area.

In one aspect, an outage management method includes detecting an incident in a hierarc hal service area. At least one node (e.g., station, device, equipment, etc.) of the service area is identified as being associated with the incident. A preset quantity of nodes of the service area is selected for communication, based on the hierarchy of the system and/or a physical location of the node(s). The selection of nodes may also be made according to an algorithm, which may be adjusted based on various factors of the incident and/or the service area. The preset quantity of nodes is pinged, with the results of the pinging used to determine an appropriate response to the incident. The determined response may then be initiated. In some aspects, the pinging includes requesting information from the nodes and/or two-way communication between the nodes and a communication system.

24. Number of Claims : 36

25. Patent Status : Published Application

26. How much this invention is related with your IDP/UDP?

71 to 90%

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

While various discreet embodiments have been described throughout, the individual features of the various embodiments may be combined to form other embodiments not specifically described. The embodiments formed by combining the features of described embodiments are also outage management systems.

BUSINESS MODEL CANVAS FOR NETWORK MANAGER

❖ KEY PARTNERS

Finance Partners

Who provide financial support for investment, purchasing row materials, maintenance cost etc.

Project Review Committee

This committee reviews all the progress every week and according their suggestions development team make decisions in coding and imolementations.

Development Team

It is a team which performs all the necessary tasks to develop the system.

Human Resources committee

It is a committee who recruit or remove manpower and engineers and other technical non-technical persons for company.

Marketing Partners

This Partners plays main role to advertise the product to the consumers via different channels.

❖ KEYACTIVITIES

Product Analysis

All the required steps are taken before starting the development and in this activity we can decide all the required resources.

Android Application Development

Development team can start its task after analysis phase and it is a major activity.

Application Maintenance

This activity will be performed after development task.

Testing

This acivity is very helpful after develop and before hosting the application on play store.

Marketing

This acivity is very helpful because we have to tell users that this application can help them in a better way.

❖ KEYRESOURCES

Users

Users are the main resource of the application because their response can make our application better.

Patents

Patents are a material which can be converted into product by process on it .

Android Studio

This can help in developing the application through all the stages.

Android Platform

It is required to run and debug the application.

Developers

They develop the application according to the users requirement and after the development they maintain it and update it according to the reviews.

❖ VALUEPROPOSITIONS

Network Discovery

It discovers all the connected users to the wifi.

IP Calculator

It calculates the range of the IP with broadcast address of the giver CIDR notation.

Ping

It is used to check whether the host name is accessible or not for a specific time.

Multi Ping

it is same as the ping service but it can check on multiple host names at a same time.

DNS Lookup

This service is used to resolve host name from IP address ,

Traceroute

It displays log of hops through which packets reach to the destination from sender.

System Properties

It displays all the system properties of the user device..

❖ CUSTOMER RELATIONSHIPS

Feedback& Service

It takes complains of customers and solve their problems.

Personalized Relationship

It is a relationship where user can use the application in its personalized manner .

❖ CHANNELS

Advertising

It is a channel which connects product to the consumers.

Android Play Store

This android based application will be hosted on play store so all the users can download or install it through the one platform. .

❖ CUSTOMERSEGMENTS

General and Internet Users

Our product is helpful to all the user they can manage their network through our application.

IT Professionals

Our product is helpful to all the IT professionals so they can check their company's network and make it secure.

Network Administrator

This application is very much helful to all the network administrator.

❖ COSTSTRUCTURE

Development Cost

It is a cost for the development and cost of alll the resources which are used for development.

Maintenance cost

Ii is a cost of maintenance of all the equipments and machinery of plant.

Marketing Cost

It is cost used to marketing and advertisement of product.

Miscellaneous cost

Other cost like damage any machinery or equipments, guest and visitors etc.

❖ REVENUESTREAMS

Advertisements

Total revenue generated by all the ads which will be posted on our application.

Subscription Fees

It is cost to subscribe our application first time.

GTU Innovation Council

Patent Drafting Exercise (PDE)

FORM 1 THE PATENTS ACT 1970 (39 OF 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT	(FOR OFFICE USE ONLY) Application No: Filing Date: Amount of Fee paid: CBR No:_____

1. Applicant(s) :

ID	Name	Nationality	Address	Mobile No.	Email
1	Bhatt Shrey Keyur	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	7567315477	shreykbhatt@gmail.com
2	Kagdi Vajid Mohamedrafik	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	9033474309	vajid9@gmail.com
3	Jhaveri Shail Rajivbhai	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	9925438949	jhaverishail1208@gmail.com
4	Patel Parth Ashokbhai	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	7405531354	parthpatel.ldce@gmail.com

2. Inventor(s):

ID	Name	Nationality	Address	Mobile No.	Email
1	Bhatt Shrey Keyur	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	7567315477	shreykbhatt@gmail.com
2	Kagdi Vajid Mohamedrafik	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	9033474309	vajid9@gmail.com

3	Jhaveri Shail Rajivbhai	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	9925438949	jhaverishail1208@gmail.com
4	Patel Parth Ashokbhai	Indian	Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.	7405531354	parthpatel.ldce@gmail.com

3. Title of Invention/Project:

Network Manager

4. Address for correspondence of applicant/authorized patent agent in india

Name: Patel Parth Ashokbhai
Address: Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technological University.
Mobile: 7405531354
Email ID: parthpatel.ldce@gmail.com

5. Priority particulars of the application(S) field in convention country

Country	Application No.	Filing Date	Name of the Applicant	Title of the Invention
N/A	*N/A*	*N/A*	*N/A*	*N/A*

6. Particulars for filing patent co-operation treaty (pct) national phase Application

International application number	International filing date as alloted by the receiving office
N/A	N/A

7. Particulars for filing divisional application

Original(First) Application Number	Date of filing of Original (first) application
N/A	N/A

8. Particulars for filing patent of addition

Original(First) Application Number	Date of filing of Original (first) application
N/A	N/A

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We, the above named inventor(s) is/are true & first inventor(s) for this invention and declare that the applicant(s). herein is/are my/our assignee or legal representative.

Date : 17 - April - 2016

Name Signature & Date

1 Bhatt Shrey Keyur _____

2 Kagdi Vajid Mohamedrafik _____

3 Jhaveri Shail Rajivbhai _____

4 Patel Parth Ashokbhai _____

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant (s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.applicant(s)

(iii) Declaration by the applicant(s)

I/We, the applicant(s) hereby declare(s) that:-

- ☑ I am/We in possession of the above mentioned invention.
- ☑ The provisional/complete specification relating to the invention is filed with this aplication.
- ☒ The invention as disclosed in the spcification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.
- ☒ There is no lawful ground of objection to the grant of the patent to me/us.
- ☑ I am/we are the assignee or the legal representative of true & first inventors.
- ☒ The application or each of the application,particulars of each are given in the para 5 was the first applicatin in the convention country/countries in respect of my/our invention.
- ☒ I/we claim the priority from the above mentioned applications(s) filed in the convention country/countries & state that no application for protection in respect of invention had been made in a convention country before that date by me/us or by any person
- ☒ My/Our application in india is based on international application under Patent Cooperation Treaty (PCT) as mentioned in para 6
- ☒ The application is divided out of my/our application(s) particulars of which are given in para 7 and pray that this application may be treated as deemed to have been filed on_____under section 16 of the Act.
- ☒ The said invention is an improvement in or modification of the invention particulars of ehivh are given in para 8.

10. Following are the attachments with the application:

- ☑ (a) Provisional specification/Complete specification
- ☒ (b) Complete specification(In confirmation with the international application) / as amended before the international Preliminary Examination Authority (IPEA),as applicable(2 copies),No.of pages.....No.of claims.....
- ☑ (c) Drawings (In confirmation with the international application)/as amended before the international Preliminary Examination Authority(IPEA),as applicable(2 copies),No.of sheets....
- ☒ (d) Priority documents
- ☒ (e) Translations of priority documents/specification/international search reports
- ☑ (f) Statement and undertaking on Form 3
- ☒ (g) Power of Authority

☒ (h) Declaration of inventorship on Form 5

☒ (i) Sequence listing in electronic Form

☒ (j) ..... Fees Rs.XXX in Cash /Cheque/Bank Draft bearin No.XXX Date: XXX on XXX Bank.

I/We hereby declare that to the best of my /our knowledge, information and belief the fact and mtters stated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this **17** day of **April** , **2016**

	Name	Signature & Date
1	Bhatt Shrey Keyur	_____
2	Kagdi Vajid Mohamedrafik	_____
3	Jhaveri Shail Rajivbhai	_____
4	Patel Parth Ashokbhai	_____

FORM 2
THE PATENTS ACT, 1970
(39 OF 1970)
&
THE PATENTS RULES, 2003
PROVISIONAL SPECIFICATION

1. Title of the project/invention :

Network Manager

2. Applicant(s) :

Bhatt Shrey Keyur (Indian)
Address : Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Kagdi Vajid Mohamedrafik (Indian)
Address : Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Jhaveri Shail Rajivbhai (Indian)
Address : Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Patel Parth Ashokbhai (Indian)
Address : Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

3. Preamble to the description :

The following specification describes the invention.

4. Description :

a. Field of Application / Project / Invention :

Networking,Android

b. Prior Art / Background of the Invention / References :

Discovery and management of network

c. Summary of the Invention/Project :

To build an android application to monitor and manage devices connected to a network.

d. Objects of the Invention/Project :

Android Device,Server

e. Drawing(s) :

49163_1_Ideation
49163_2_AEIOU
49163_3_Empathy
49163_4_Product Development
49163_5_BMC

f. Description of the Invention :

Network Manager is a powerful network application to analyze and setup your network, help you to quickly detect any problems in computer networks and speed up these networks. The app includes the most common network tools that you can find in Windows or Linux. They will help you fix the problem in within few minutes or optimize network while you being anywhere. It is very useful for IT professionals and network administrators.

Network Manager has a simple interface, so you in a few seconds will receive full information about your network connection, you will find internal and external IP address, SSID, BSSID, broadcast address, gateway, network mask, country, region, city, the geographical coordinates of the provider (latitude and longitude) and other basic information. Network Manager app provides access to the most popular network tools that network administrators and users often use on their computers.

g. Examples :

h. Unique Features of the Project :

Network Discovery.Ping,Multiping,Traceroute,Port Scanning,Customization,System Properties,CPU performance,IP Calculator,DNS Lookup

5. Date & Signature :

Date :17 - April - 2016

Sign and Date
Bhatt Shrey Keyur

Sign and Date
Kagdi Vajid Mohamedrafik

Sign and Date
Jhaveri Shail Rajivbhai

Sign and Date
Patel Parth Ashokbhai

6. Abstract of the project / invention :

FORM 3
THE PATENTS ACT, 1970
(39 OF 1970)
&
THE PATENTS RULES, 2003
STATEMENT AND UNDERTAKING UNDER SECTION 8

1. Declaration :

I/We, Bhatt Shrey Keyur ,
Kagdi Vajid Mohamedrafik ,
Jhaveri Shail Rajivbhai ,
Patel Parth Ashokbhai

2. Name, Address and Nationality of the joint Applicant :

Bhatt Shrey Keyur (Indian)
Address :Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Kagdi Vajid Mohamedrafik (Indian)
Address :Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Jhaveri Shail Rajivbhai (Indian)
Address :Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Patel Parth Ashokbhai (Indian)
Address :Computer Engineering , L. D. College Of Engineering, Ahmedabad , Gujarat Technologycal University.

Here by declare :
(i) that I/We have not made any application for the same/substantially the same invention outside India.
(ii) that the right in the application(s) has/have been assigned to,

Name of the Country	*Date of Application*	*Application Number*	*Status of the Application*	*Date of Publication*	*Date of Grant*
N/A	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

(iii) that I/We undertake that up to the date of grant of patent by the Controller , I/We would keep him inform in writing the details regarding corresponding application(s) for patents filed outside India within 3 months from the date of filing of such application.

Dated this **17** day of **April** , **2016**

3. Signature of Applicants :

Sign and Date
Bhatt Shrey Keyur

Sign and Date
Kagdi Vajid Mohamedrafik

Sign and Date
Jhaveri Shail Rajivbhai

Sign and Date
Patel Parth Ashokbhai

To
The Controller of Patent
The Patent Office, at **Mumbai.**

Enrollment No :	120280107011	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Kagdi Vajid Mohamedrafik	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval :

Periodic Progess Report : First PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

Learnt about the installation of Android SDK(Software Development Kit) and installation of Plugins in Eclipse Learnt Android Emulator and Genymotion Emulator for running the application Learnt ADT Bundle(Android Development Tools•Eclipse) and Implemented following topics in android:• 1)Android Activity,Activity Life Cycle,Intent,Fragment 2)Android Form Widgets like TextView,EditText 3)Android basic controls like, =>Buttons,RadioButtons,RadioGroups,CheckBox,ProgressWheel,ProgressBar,RatingBar,SeekBar, QuickContactBadge,Switch etc. 4)Android Textfields like username,password,address,contact No etc. 5)Android Layouts like Linear Layout,Relative Layout,TableLayout,Framelayout,Gridlayout 6)Android Composite Items like, =>ListView,CustomListview,GridView,CustomGridView,TabView,WebView,SearchView, ScrollView,Slidingdrawer,TabWidget etc. 7)Android Images and media like, => ImageView,ImageButton,Tabview with Image Icon ,ViewPager, Gallary,MediaController,VideoView etc. 8)Android pickers like DatePicker,TimePicker and calander 9)Adapters like ArrayAdapter,ImageAdapter and Inflater,Holder 10)SessionManager,Shared Preferences using Login demo Prepared basic design and flow of the application and made wireframes for the same

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

• I refered lynda.com and youtube videos .I read contents of developer.android.com and vogella.com

Enrollment No :	120280107011	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Kagdi Vajid Mohamedrafik	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 4 hours, 7 minutes, 30 seconds

Periodic Progess Report : Second PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

• Learnt and implemented googlemap and GPS. • Learnt how to implement programs of ip calculator and DNS lookup via java socket programming

2. What challenge you have faced ?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need ?

• Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

• I referred lynda.com and youtube videos .I read contents of developer.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Enrollment No :	120280107011	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Kagdi Vajid Mohamedrafik	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 2 minutes, 29 seconds

Periodic Progess Report : Third PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

R&D about port scanner,network discovery,history,data storage R&D about SQLite Database

2. What challenge you have faced ?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

• I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107011	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Kagdi Vajid Mohamedrafik	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 4 minutes, 46 seconds

Periodic Progess Report : Forth PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

Learnt and implemented IP calculator completely R&D about DDOS attack and benchmarking

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

- I refered lynda.com and youtube videos. I refered Head First Android Development, w3schools.com, stackoverflow.com

Enrollment No :	120280107031	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval :

Periodic Progess Report : First PPR

Project Network Manager
:

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

Learnt about the installation of Android SDK(Software Development Kit) and installation of Plugins in Eclipse Learnt Android Emulator and Genymotion Emulator for running the application Learnt ADT Bundle(Android Development Tools-Eclipse) and Implemented following topics in android:- 1)Android Activity,Activity Life Cycle,Intent,Fragment 2)Android Form Widgets like TextView,EditText 3)Android basic controls like, =>Buttons,RadioButtons,RadioGroups,CheckBox,ProgressWheel,ProgressBar,RatingBar,SeekBar, QuickContactBadge,Switch etc. 4)Android Textfields like username,password,address,contact No etc. 5)Android Layouts like Linear Layout,Relative Layout,TableLayout,Framelayout,Gridlayout 6)Android Composite Items like, =>ListView,CustomListview,GridView,CustomGridView,TabView,WebView,SearchView, ScrollView,Slidingdrawer,TabWidget etc. 7)Android Images and media like, => ImageView,ImageButton,Tabview with Image Icon ,ViewPager, Gallary,MediaController,VideoView etc. 8)Android pickers like DatePicker,TimePicker and calander 9)Adapters like ArrayAdapter,ImageAdapter and Inflater,Holder 10)SessionManager,Shared Preferences using Login demo Prepared basic design and flow of the application and made wireframes for the same

2. What challenge you have faced?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred?

• I refered lynda.com and youtube videos .I read contents of developer.android.com and vogella.com

Enrollment No :	120280107031	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 4 hours, 7 minutes, 30 seconds

Periodic Progess Report : Second PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

• Learnt and implemented googlemap and GPS. • Learnt how to implement programs of ip calculator and DNS lookup via java socket programming

2. What challenge you have faced ?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need ?

• Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

• I referred lynda.com and youtube videos .I read contents of developer.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Enrollment No :	120280107031	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 2 minutes, 29 seconds

Periodic Progess Report : Third PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

R&D about port scanner,network discovery,history,data storage R&D about SQLite Database

2. What challenge you have faced?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred?

• I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107031	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 4 minutes, 46 seconds

Periodic Progess Report : Forth PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

Learnt and implemented IP calculator completely R&D about DDOS attack and benchmarking

2. What challenge you have faced?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred?

- I refered lynda.com and youtube videos. I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107032	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval :

Periodic Progess Report : First PPR

Project Network Manager
:

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

Learnt about the installation of Android SDK(Software Development Kit) and installation of Plugins in Eclipse Learnt Android Emulator and Genymotion Emulator for running the application Learnt ADT Bundle(Android Development Tools-Eclipse) and Implemented following topics in android:- 1)Android Activity,Activity Life Cycle,Intent,Fragment 2)Android Form Widgets like TextView,EditText 3)Android basic controls like, =>Buttons,RadioButtons,RadioGroups,CheckBox,ProgressWheel,ProgressBar,RatingBar,SeekBar, QuickContactBadge,Switch etc. 4)Android Textfields like username,password,address,contact No etc. 5)Android Layouts like Linear Layout,Relative Layout,TableLayout,Framelayout,Gridlayout 6)Android Composite Items like, =>ListView,CustomListview,GridView,CustomGridView,TabView,WebView,SearchView, ScrollView,Slidingdrawer,TabWidget etc. 7)Android Images and media like, => ImageView,ImageButton,Tabview with Image Icon ,ViewPager, Gallary,MediaController,VideoView etc. 8)Android pickers like DatePicker,TimePicker and calander 9)Adapters like ArrayAdapter,ImageAdapter and Inflater,Holder 10)SessionManager,Shared Preferences using Login demo Prepared basic design and flow of the application and made wireframes for the same

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

• I refered lynda.com and youtube videos .I read contents of developer.android.com and vogella.com

Enrollment No :	120280107032	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 4 hours, 7 minutes, 30 seconds

Periodic Progess Report : Second PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

• Learnt and implemented googlemap and GPS. • Learnt how to implement programs of ip calculator and DNS lookup via java socket programming

2. What challenge you have faced?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need?

• Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred?

• I referred lynda.com and youtube videos .I read contents of developer.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Enrollment No :	120280107032	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 2 minutes, 29 seconds

Periodic Progess Report : Third PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

R&D about port scanner,network discovery,history,data storage R&D about SQLite Database

2. What challenge you have faced?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred?

• I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107032	College :	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	Department :	Computer Engineering
Mobile No :		Discipline :	BE
Email :		Semester :	Semester 7

Time Interval : 0 days, 0 hours, 4 minutes, 46 seconds

Periodic Progess Report : Forth PPR

Project Network Manager :

Status : Submitted (Freeze)

1. What Progress you have made in the Project?

Learnt and implemented IP calculator completely R&D about DDOS attack and benchmarking

2. What challenge you have faced?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred?

- I refered lynda.com and youtube videos. I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 7

Time Interval :

Periodic Progess Report : First PPR

Project : Network Manager

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

Learnt about the installation of Android SDK(Software Development Kit) and installation of Plugins in Eclipse Learnt Android Emulator and Genymotion Emulator for running the application Learnt ADT Bundle(Android Development Tools•Eclipse) and Implemented following topics in android:• 1)Android Activity,Activity Life Cycle,Intent,Fragment 2)Android Form Widgets like TextView,EditText 3)Android basic controls like, =>Buttons,RadioButtons,RadioGroups,CheckBox,ProgressWheel,ProgressBar,RatingBar,SeekBar, QuickContactBadge,Switch etc. 4)Android Textfields like username,password,address,contact No etc. 5)Android Layouts like Linear Layout,Relative Layout,TableLayout,Framelayout,Gridlayout 6)Android Composite Items like, =>ListView,CustomListview,GridView,CustomGridView,TabView,WebView,SearchView, ScrollView,Slidingdrawer,TabWidget etc. 7)Android Images and media like, => ImageView,ImageButton,Tabview with Image Icon ,ViewPager, Gallary,MediaController,VideoView etc. 8)Android pickers like DatePicker,TimePicker and calander 9)Adapters like ArrayAdapter,ImageAdapter and Inflater,Holder 10)SessionManager,Shared Preferences using Login demo Prepared basic design and flow of the application and made wireframes for the same

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

• I refered lynda.com and youtube videos .I read contents of developer.android.com and vogella.com

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 7

Time Interval : 0 days, 4 hours, 7 minutes, 30 seconds

Periodic Progess Report : **Second PPR**

Project : Network Manager

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

• Learnt and implemented googlemap and GPS. • Learnt how to implement programs of ip calculator and DNS lookup via java socket programming

2. What challenge you have faced ?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need ?

• Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

• I referred lynda.com and youtube videos .I read contents of developer.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 7

Time Interval : 0 days, 0 hours, 2 minutes, 29 seconds

Periodic Progess Report : Third PPR

Project : Network Manager

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

R&D about port scanner,network discovery,history,data storage R&D about SQLite Database

2. What challenge you have faced ?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

• I refered Head First Android Development, w3schools.com, stackoverflow.com.

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 7

Time Interval : 0 days, 0 hours, 4 minutes, 46 seconds

Periodic Progess Report : Forth PPR

Project : Network Manager

Status : Submitted (Freeze)

1. What Progress you have made in the Project ?

Learnt and implemented IP calculator completely R&D about DDOS attack and benchmarking

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

- I refered lynda.com and youtube videos. I refered Head First Android Development, w3schools.com, stackoverflow.com.

PRINT BACK

Enrollment No : 120280107011
Student Name : Kagdi Vajid Mohamedrafik
Mobile No :
Email :
College : L. D. College Of Engineering, Ahmedabad
Department : Computer Engineering
Discipline : BE
Semester : Semester 8

PPR Details

Time Interval : -

Periodic Progess Report : First PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Network Discovery(Discover all devices connected to wifi) Port scanning Customization

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference, but we think that some of the concepts and their coding is quite complex and difficult to understand and implement.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No : 120280107011
Student Name : Kagdi Vajid Mohamedrafik
Mobile No :
Email :
College : L. D. College Of Engineering, Ahmedabad
Department : Computer Engineering
Discipline : BE
Semester : Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 50 seconds

Periodic Progess Report : Second PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: IP calculator DNS lookup

2. What challenge you have faced ?

Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need ?

Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

I referred lynda.com and youtube videos .I read contents of developers.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No : 120280107011
Student Name : Kagdi Vajid Mohamedrafik
Mobile No :
Email :
College : L. D. College Of Engineering, Ahmedabad
Department : Computer Engineering
Discipline : BE
Semester : Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 27 seconds

Periodic Progess Report : Third PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Ping Multiple ping Traceroute

2. What challenge you have faced ?

Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I refered Head First Android Development, w3schools.com, stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No : 120280107011
Student Name : Kagdi Vajid Mohamedrafik
Mobile No :
Email :
College : L. D. College Of Engineering, Ahmedabad
Department : Computer Engineering
Discipline : BE
Semester : Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 23 seconds

Periodic Progess Report : Forth PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: System Property CPU&Memory performance Validation and control Material Designing(Theme)

2. What challenge you have faced ?

We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107031	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	**Department :**	Computer Engineering
Mobile No :	9925438949	**Discipline :**	BE
Email :	jhaverishail1208@gmail.com	**Semester :**	Semester 8

PPR Details

Time Interval : •

Periodic Progess Report : First PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: •Network Discovery(Discover all devices connected to wifi)• •Port scanning •Customization

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference, but we think that some of the concepts and their coding is quite complex and difficult to understand and implement.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

Comment by External Guide :

None

Comment by HOD :

None

Comment by Principal :

None

Comment by University Admin :

None

PRINT BACK

Enrollment No :	120280107031	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	**Department :**	Computer Engineering
Mobile No :	9925438949	**Discipline :**	BE
Email :	jhaverishail1208@gmail.com	**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 4 minutes, 56 seconds

Periodic Progess Report : Second PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: IP calculator DNS lookup

2. What challenge you have faced ?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need?

Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

I referred lynda.com and youtube videos .I read contents of developers.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

Comment by External Guide :

None

Comment by HOD :

None

Comment by Principal :

None

Comment by University Admin :

None

PRINT BACK

Enrollment No :	120280107031	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	**Department :**	Computer Engineering
Mobile No :	9925438949	**Discipline :**	BE
Email :	jhaverishail1208@gmail.com	**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 27 seconds

Periodic Progess Report : Third PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Ping Multiple ping Traceroute

2. What challenge you have faced ?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I refered Head First Android Development, w3schools.com, stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

Comment by External Guide :

None

Comment by HOD :

None

Comment by Principal :

None

Comment by University Admin :

None

PRINT BACK

Enrollment No :	120280107031	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Jhaveri Shail Rajivbhai	**Department :**	Computer Engineering
Mobile No :	9925438949	**Discipline :**	BE
Email :	jhaverishail1208@gmail.com	**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 34 seconds

Periodic Progess Report : Forth PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: System Property CPU&Memory performance Validation and control Material Designing(Theme)

2. What challenge you have faced ?

We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

Comment by External Guide :

None

Comment by HOD :

None

Comment by Principal :

None

Comment by University Admin :

None

PRINT BACK

Enrollment No :	120280107032	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : •

Periodic Progess Report : First PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Network Discovery(Discover all devices connected to wifi) Port scanning Customization

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference, but we think that some of the concepts and their coding is quite complex and difficult to understand and implement.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107032	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 2 minutes, 17 seconds

Periodic Progess Report : Second PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: IP calculator DNS lookup

2. What challenge you have faced ?

Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need?

Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

I referred lynda.com and youtube videos .I read contents of developers.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107032	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 18 seconds

Periodic Progess Report : Third PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Ping Multiple ping Traceroute

2. What challenge you have faced ?

Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I refered Head First Android Development, w3schools.com, stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107032	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Patel Parth Ashokbhai	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 17 seconds

Periodic Progess Report : Forth PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: System Property CPU&Memory performance Validation and control Material Designing(Theme)

2. What challenge you have faced ?

We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : •

Periodic Progess Report : First PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Network Discovery(Discover all devices connected to wifi) Port scanning Customization

2. What challenge you have faced ?

Some of the features requires rooted phone to run the application. We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference, but we think that some of the concepts and their coding is quite complex and difficult to understand and implement.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 3 minutes, 34 seconds

Periodic Progess Report : Second PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: IP calculator DNS lookup

2. What challenge you have faced ?

• Mainly in my project major challenge is to gather various requirements and R&D. For this I have to search a lot because my project contains so many concepts that my R&D becomes longer and longer. • Other big challenge is to create good UI. For this I have to learn various softwares like dreamweaver. And implementing some of the functionalities is also causing problems.

3. What support you need?

Recently our work is to create diagrams so for this I required some software to create diagrams such as edraw max, visio etc. Further to implement database tables we required to learn sql and pl/sql, so we required software and books for this. I also refer black books for java. Internet support is essential for all work in my project for examples finding codes, testing etc.

4. Which literature you have referred ?

I referred lynda.com and youtube videos .I read contents of developers.android.com and vogella.com and the most useful site for me is stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 3 minutes, 2 seconds

Periodic Progess Report : Third PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: Ping Multiple ping Traceroute

2. What challenge you have faced ?

• Major challenge in my project is to maintain secure database. • Second big challenge is to provide reliability and synchronization.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I refered Head First Android Development, w3schools.com, stackoverflow.com.

Comments

Comment by Internal Guide :

Ok

PRINT BACK

Enrollment No :	120280107033	**College :**	L. D. College Of Engineering, Ahmedabad
Student Name :	Bhatt Shrey Keyur	**Department :**	Computer Engineering
Mobile No :		**Discipline :**	BE
Email :		**Semester :**	Semester 8

PPR Details

Time Interval : 0 days, 0 hours, 1 minutes, 31 seconds

Periodic Progess Report : Forth PPR

Project : Network Manager

Status : Reviewed (Freeze)

1. What Progress you have made in the Project ?

Performed following tasks: System Property CPU&Memory performance Validation and control Material Designing(Theme)

2. What challenge you have faced ?

We are learning networking principles and trying how to code for the network related programs required in our app in Java and Android and we have gone through many programs on internet for our reference,but we think that some of the concepts and their coding is quite complex and difficult to understand and implement as we are in the beginner stage in this platform.

3. What support you need ?

For my work I mainly required internet support to search and learn, also some reference books. To learn new languages I refer black books. For implementing our code I needed various testing software. So mainly I need technical support for fulfill my requirements.

4. Which literature you have referred ?

I referred lynda.com, youtube videos,developers.android.com and vogella.com

Comments

Comment by Internal Guide :

Ok