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UNIVERSITY OF TECHNOLOGY
FACULTY OF COMPUTER SCIENCE AND ENGINEERING



Computer Networks Lab (CO3094)

Report (Semester 211)

COMPUTER NETWORK DESIGN FOR BUILDING OF A BANK

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1 Requirement Analysis

1.1 Requirements

1.1.1 Functional requirements

1.1.2 Non-functional requirements

1.2 Survey Checklist

1.2.1 Headquarters

1.2.2 Branches

1.3 Network Structure

1.4 High Load Areas

1.5 Wireless Coverage



2 Network Blueprint

2.1 Recommended Equipment

2.2 Schematic Physical Setup

2.3 IP Address Table



3 Network Throughput, Bandwidth and Safety Parameters

3.1 Throughput

3.2 Bandwidth

3.3 Safety Parameters



4 Packet Tracer Design

4.1 Switch and VLAN Configuration

4.2 Wireless Router Configuration

4.3 OSPF Protocol Setup

4.4 Security Setup



5 System Tests

5.1 Ping Test

5.2 Traceroute Test

5.3 MAC Address Table and OSPF IP Table



6 Results and Conclusions

6.1 Re-evaluation of the design

6.1.1 Reliability

6.1.2 Ease of Upgrade

6.1.3 Diversity of Supporting Software

6.1.4 Safety

6.2 Remaining Problems

6.2.1 Security

6.2.2 Scalability

6.3 Development Orientation

6.3.1 Security

6.3.2 Scalability