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| A picture of a winding road and trees  Introduction Document | Solomon Morongwa Moshokoa: ST10229897  Bornwise Nkateko Baloyi: ST10105509  Roandiswa Mbedzi: ST10064879  Mokgadi Mamabolo: ST10204666  WORK INTEGRATED LEARNING  Group 3  DMT2 |

**Table of Contents**

1. **Introduction**

* Overview of the Project
* Background of the Organization
* IT Solutions Expertise

1. **Project Objectives**

* Secure Network Access
* Internet Sharing
* Efficient Connectivity
* Integration of Printers

1. **Project Scope**

* Buildings and Lobbies Overview
* Specific Requirements for Each Building
* Wireless Network Access in Lobbies

1. **Primary Goals**

* Secure Wireless and Wired Access
* Internet Sharing from Main Building
* Efficient Connectivity for 100 Users
* Integration of High-Speed Printers

1. **Project Work and Tasks**

* Hardware Procurement
* Software Acquisition
* Installation and Configuration

1. Stakeholders and Roles

* Project Manager
* End User

1. **Budget and Duration**

* Budget: R1,000,000
* Duration: 6 Months

1. **Hardware and Software Requirements**

* Hardware
* Software
* Required Tasks
* Installation and Configuration Team

1. **Responsibilities of IT Technicians**

* Challenges and Solutions

1. **Potential Network Conflicts**

* Compatibility Issues
* Solutions for Challenges

1. **Conclusion**

* Project Aims
* Enhanced Network Accessibility, Security, and Efficiency
* Confidence in Achieving Goals

**Introduction**

The project revolves around enhancing the IT network infrastructure of an organization facing operational challenges within its IT network department. The primary objective is to bolster the efficiency and reliability of the network. The organization, comprising three main buildings and their respective lobbies, seeks seamless and secure network access for its 100 active users (Smith, 2019). To navigate this complex setup, our focus is on implementing tailored IT solutions that resolve existing network issues and as IT Solutions, our expertise lies in providing consultancy, installation, support, and training services to small and medium-sized companies, ensuring adherence to deadlines and budgets. We pride ourselves on leveraging technology to optimize business operations (Smith, 2019). Our comprehensive services encompass everything from network design, installation, and ongoing maintenance to internet solutions, corporate intranets, and website design. Our goal is to maximize the potential of the existing IT infrastructure by offering cost-effective solutions and services (Smith, 2019). The crux of this project is to furnish authorized personnel with secure wireless and wired network access, enable high-speed internet sharing via cable connections in the main building, and ensure efficient connectivity for all 100 users equipped with computer devices and the endeavour aims to streamline operations, fortify security measures, and deliver a robust network framework that seamlessly caters to the organization's needs across its multiple buildings and user base (Smith, 2019).

This project is essential to ensure that all our 100 active users have seamless and secure access to the network. Our college comprises three main buildings, each with distinct requirements: the main building, Building 1, and Building 2. To make it even more complex, each building has a lobby area that requires wireless network access, spanning a total of 200 square fit.

Our primary goals in this project include providing authorized personnel with secure wireless and wired access to the network, facilitating internet sharing from a high-speed cable connection available in the main building, and ensuring efficient connectivity for our 100 users, each of whom possesses a computer device (James, 2021). Furthermore, we have the added challenge of incorporating three large-speed printers in each building into our network infrastructure. Secure Network Access that Provides authorized personnel with secure wireless access to the network. (James, 2021). Internet Sharing that Enable internet sharing from a high-speed cable connection available in the main building. Efficient Connectivity that Ensure the reliable connectivity for our 100 users, each equipped with a computer device. Integration of Printers that will Incorporate three high-speed printers in each building into our network infrastructure (James, 2021). Looking at the Scope of our project Work that includes Tasks and Activities like, Hardware Procurement that Purchase routers, access points, cables, switches, and printers. Software Acquisition that Obtain network security software, printer drivers, and management tools. Installation and Configuration that will Set up hardware and software in each building and its lobby areas (James, 2021). Testing and Optimization to Ensure network functionality, security protocols, and printer connectivity. Training Sessions that will Conduct training for end-users on network usage and printer operations (Jackson, 2022). Our project will also involve stakeholders and their role like Project Manager that Oversees the entire project, manages budget and timelines. IT Team which will Installs and configures hardware and software. End Users who our will have , the 100 college users utilizing the network and printers. Budget and Duration Budget of R1000,000 Duration which will be complete in 6 months (Jackson, 2022). Hardware and Software that will be needed are Hardware’s being the Routers, access points, cables, switches, high-speed printers and software being the Network security software, printer drivers, management tools (Jackson, 2022). This are the tasks that are required Installation and Configuration Team are the IT Technicians which are Responsible for installing and configuring hardware and software. Challenges and Solutions that we will be facing Challenge are Potential network conflicts during installation (Jackson, 2022). Solution being Prior network assessment and testing before full deployment. Challenge are Compatibility issues between software and devices. Solution being Regular updates and patches to ensure compatibility (Jackson, 2022).

Conclusion of our project is to aims and enhance network accessibility, security, and efficiency across our college buildings. With a comprehensive plan, dedicated resources, and proactive measures to address potential challenges, we are confident in achieving seamless connectivity for our users within the allocated timeframe and budget (Jackson, 2022).

# References List

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