Documentation

Group 11

Project submitted at the North-West University

Module code:	CMPG315
Date:	16-05-2024

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Description of Network Topology:

In designing the network topology for the single-story detached property, we've meticulously crafted a robust infrastructure tailored to meet the diverse needs of each department while ensuring seamless connectivity and efficiency throughout the building. Leveraging a combination of wired and wireless technologies, our solution optimises performance, reliability, and scalability across all functional areas.

Star Topology:
Across the property, we've implemented a star topology to centralise network management and enhance fault tolerance. Each station is connected to a central hub, facilitating streamlined troubleshooting and simplified expansion.

13 Offices:
Spread throughout the building, the 13 offices accommodate 2-4 people each, utilising either desktops or laptops with Ethernet ports.

In each office:
- A switch is used to provide reliable network access, ensuring seamless connectivity for office equipment and personal devices.
- Wi-Fi is available for 2-4 devices per person, catering to the varying connectivity needs of staff members.

4 carefully selected offices:
- Include access points to provide shared internet access to the offices.
- These access points retrieve the internet access from the machine room through the use of a switch.

Technicians' Office:

The technicians' office serves as a hub for technical operations, accommodating two technicians and their equipment. In this office:

- Two wired access points cater to office work, providing reliable connectivity for essential tasks.
- Four additional wired access points are reserved for potential office equipment maintenance.
- Direct wired access to the machine room facilitates efficient communication and management of network resources.
- Wi-Fi is available for up to 8 devices per technician, ensuring flexibility and mobility within the workspace.

Reception/Waiting Area:

The reception/waiting area is designed to accommodate guests and reception staff, providing essential connectivity and access to network resources. In this area:

- Two wired access points, one per person, offer reliable network access for reception staff.
- Full Wi-Fi availability ensures seamless connectivity for reception staff, with 2-4 devices per person.
- A networked printer is available for printing tasks.
- Guest Wi-Fi network has been established to provide temporary internet access for visitors. This thoughtful separation keeps the primary network secure for staff use while offering a convenient connection for guests.

Kitchen:

The kitchen area is equipped with IoT devices and staff connectivity. In this area:

- Four wired access points cater to IoT devices, facilitating integration within the network infrastructure.
- Secure Wi-Fi access is available throughout the kitchen area, specifically for staff members. This enables convenient connection to network resources, applications, and the internet, promoting productivity and information sharing during breaks or while on the go.

Meeting Room/Boardroom:

The meeting room/boardroom is designed to facilitate large gatherings and teleconferencing sessions, offering essential connectivity for productive collaboration. In this room:

- Two dedicated wired access points directly connect your IP phones and PCs for teleconferencing. This eliminates potential Wi-Fi interference, ensuring crystal-clear audio and video during even the most important meetings.
- The access point acts as a central connection point for the devices connected wirelessly to the network
- Widespread Wi-Fi availability empowers staff to seamlessly connect their devices throughout the workspace. This fosters effortless collaboration, information sharing, and real-time communication during meetings or throughout the workday.

Machine Room/Server Room:

The machine room/server room serves as the backbone of the network infrastructure, housing critical servers, routers, switches, IOT devices, a tablet and a home gateway. It is a secure and environmentally controlled room. In this room:

- All servers, routers, and major switches are centrally located as per company policy, ensuring efficient management and access to network resources.
- The router provides internet connectivity for all devices by establishing a connection between the internal network and the external ISP network.

The main switch in the machine room gives all of the equipment (servers, router, and other switches) high-speed connectivity.

- The three switches are used to accommodate more ports for connecting several wired access points in the other rooms in the building. After then, the main switch would once again be connected to these extra switches through the router.
- The seven servers provide work-from-home support, intranet hosting, centralized data and file storage are the main tasks performed by these servers. In addition, the servers offer network services such as DNS and DHCP. DHCP being the main server.
- The ISP fibre line terminates here, directing all Internet traffic through the machine room.
- No wired access points are deployed apart from open ports on network hardware, maintaining security and efficiency.

Open Floor Space:

The open floor space is a dynamic workspace accommodating a large number of staff members. In this area:

- One hundred wired access points are strategically deployed to provide reliable network access for Ethernet-capable devices.
- Wi-Fi is available for staff members, offering flexibility and mobility within the workspace.
- Five networked printers are conveniently located near the machine room, ensuring easy access for printing tasks.

By implementing this comprehensive network topology, we've created a robust infrastructure that meets the connectivity needs of each department while ensuring seamless communication and productivity throughout the building.

Budget:

Device Costs:

13 Offices:

- 4 Access points R1 049.00 each
- 13 Switch-PT R350.00 each

Technicians' Office:

- 2 Switch-PT R350.00 each
- 2 AccessPoint-PT R1 049.00 each

Reception/Waiting Area:

- 2 Switch-PT R350.00 each
- 2 AccessPoint-PT R1 049.00 each

Kitchen:

- 1 Switch-PT R350.00 each
- 1 AccessPoint-PT R1 049.00 each

Meeting Room/Boardroom:

- 1 Switch-PT R350.00 each
- 1 AccessPoint-PT R1 049.00 each

Machine Room/Server Room:

- 1 (3560-24PS)Multilayer Switch R21 295.34 each
- 2 Switch-PT R1 049.00 each
- 2 (2950T-24)Switch R709.00 each
- 1 (1841)Router R1 950.00 each
- 1 Router-PT R3 155.00 each
- 1 HomeGateway(DLC100) R126.24 each

Open Floor Space:

- 6 Switch-PT R350.00 each
- 2 AccessPoint-PT R1 049.00 each

Cabling Costs:

Copper Crossover Cables: R 3 200 per 3m. A total of 3 metres will be required.
Copper Straight Through Cables: R 20 per metre. A total of 5 metres will be required totalling an amount of R 100

Labour Costs:

Based on these tasks and the size(100*50 metres) of the building, Assuming an average hourly rate of R 250 per hour and a total installation time of around 100-300 hours for a project of this scale, the estimated labour cost would be:

Labour Cost = Hourly Rate * Total Installation Time

Using the midpoint of the installation time range (200 hours) and the average hourly rate (R200), the estimated labour cost would be:
Labour Cost = R 200/hour * 200 hours = R 30000

Contingency Plans:

- Switch failure(e.g.physical layer failure) - Space TV 24 port 10/100/1000m Ethernet switch: R2 399
- Power failure/Outage (e.g.loadshedding) – RYOBI 7.5 KVA 4-stroke Key-Start Petrol Generator: R 13 999

Remote Access Software:

2 Microsoft Windows Server 2019 – 50 RDS User CAL: R 4999 each (once-off)

Total Estimated Cost:

Total cost= Device Cost + Cabling Costs + Labour Costs + Contingencies + Remote Software
= R 49622 + R 3310 + R 30000 + R 13999 + R 9998
= **R 106919**

Remote Connection

We opted to use Windows Remote Desktop as the software for users to connect remotely. The reason for this choice is:

Windows Remote Desktop offers cost-effective licensing options, making it suitable for businesses aiming to minimise costs while ensuring reliable remote access.
It provides a user-friendly interface that simplifies the remote connection process, requiring minimal technical expertise from users to connect remotely quickly and easily.
Windows Remote Desktop is compatible with various operating systems such as Windows, macOS, Linux, Android, and iOS, reflecting the company's preference for Windows computers while accommodating users with a wide variety of devices.
It prioritises security by utilising advanced encryption protocols to protect remote connections. Features such as two-factor authentication, access control, and authorization settings ensure that only authorised users can remotely connect to your network.
The software is renowned for its powerful remote access capabilities, leveraging proprietary technologies to deliver fast and smooth remote connections even in low-bandwidth environments.
It includes collaboration features such as file transfer and remote desktop sharing, facilitating effective communication and collaboration between team members working remotely.
Windows Remote Desktop places great importance on user privacy and data protection, adhering to strict security standards to encrypt all remote sessions and safeguard sensitive information during remote access.
Overall, Windows Remote Desktop offers an affordable and easy-to-use remote access solution with robust security features, cross-platform compatibility, and efficient performance, meeting the needs of various scenarios while prioritising security and collaboration among team members.

To connect remotely:

1. Install Windows Remote Desktop on both the remote and local computers.
2. Open Windows Remote Desktop on the remote computer and note down the Remote Desktop ID.
3. Launch Windows Remote Desktop on the local computer.
4. Enter the remote computer's Remote Desktop ID in the provided field.
5. Click "Connect" to establish the remote connection.
6. Confirm the connection on the remote computer.
7. Gain remote access to the desktop of the remote computer.
8. Close Windows Remote Desktop to end the remote session.

However, it is crucial to ensure stable internet connectivity on both computers and obtain proper authorization before connecting remotely.

Team Reflections

Packet Tracer network

This year's Packet Tracer project was an incredible learning experience for our team, and we are proud of the collaborative effort we have put into it. As a group, we delved into the complexities of network design, troubleshooting, and optimization, gaining valuable hands-on experience every step of the way.

One aspect that stood out was the precise planning required to meet the diverse needs of the company outlined in the project brief. From accommodating various office setups to ensuring reliable internet access for both wired and Wi-Fi devices, every detail demanded attention. Through brainstorming sessions and constructive debates, we honed our problem-solving skills, learning to anticipate challenges and devise effective solutions.

The project also pushed us to learn the hard way at times. For instance, we encountered unexpected obstacles while implementing certain configurations or integrating new devices. However, each setback served as a valuable lesson, prompting us to delve deeper into Packet Tracer's functionalities and explore alternative approaches. As a result, we have not only overcome these challenges but also expanded our understanding of network architecture and administration.

Despite the occasional hurdles, every moment invested in this project was undoubtedly worth it. As we fine-tuned the network layout, optimised bandwidth allocation, and ensured seamless connectivity throughout the building, we witnessed the tangible impact of our efforts. Seeing our designs come to life within the simulated environment was immensely rewarding, reinforcing our confidence in our abilities and deepening our appreciation for the complexities of network engineering.

Moreover, the project fostered a sense of companionship among team members as we collaborated, shared insights, and supported each other through the ups and downs. By leveraging our collective expertise and diverse perspectives, we achieved a level of synergy that elevated the quality of our final deliverable.

In conclusion, our journey as a Packet Tracer development team was not just about creating a network infrastructure—it was about embracing challenges, embracing collaboration, and ultimately, empowering ourselves with invaluable skills and experiences that will serve us well in our future endeavours.

Text Messaging App

When evaluating programming languages, we considered Python but encountered a hurdle: Python required additional libraries, directly contradicting the rubric. In contrast, C# offered an ecosystem without external dependencies. Additionally, Firebase, while tempting, proved unstable and had costs we could not afford. So, we made our own course, and created a reliable server in C# with one of our computers to host group and peer servers.

One of the major discussion points, as little as it may look on the outside, was setting up the write GUI. We have so many strong personalities with valid ideas, we however peer reviewed each idea and set-up a HCI compliant and user-friendly GUI that would allow the user to use the app without need of guidance.

In our research we also got our hands dirty with TCP/IP protocols and sockets. With this newly acquired skill set, we developed our messaging application and set up our own server. With this server as a foundation, we were able to build on top of it the functionality of messages transmitted between two clients and a group of clients connected.

A major struggle for us was not being skilled enough to start from nothing, we collectively had to go on a learning journey to get the knowledge to give our worth to the group. We overcame this challenge by being genuinely positive with each other and patient while holding one and other to the needed standards to complete the project on time.

Group's working procedure

The project was divided into two distinct workstreams: application development and network infrastructure. Both teams followed a standardised procedure to ensure consistency and efficiency.

- Group members communicate respectfully with each other.
- Meetings are held on Discord; we have a channel for each team and one for the whole group.
- Actively contribute to a positive and collaborative team atmosphere.
- The group leader must be informed before a meeting if a member will not be able to attend.
- Group members who are running late must send a text in the group chat or send it directly to the group leader.
- If you intend to leave early, you must inform the group leader.
- Ensure you consistently meet deadlines and fulfil the responsibilities you agree to.
- Communicate any potential delays or challenges proactively to avoid surprises or disruptions for others.
- Be willing to help members when they encounter difficulties or require support.
- There should be an openness to constructive criticism from members as well as a willingness to consider it.
- Version control for the Packet Tracer file is implemented to avoid confusion and ensure everyone works on the latest version.
- Beyond fulfilling individual assignments, group members are valued for their proactive contributions and initiative in tackling tasks that benefit the overall project.
- During a meeting, we do not use our phones. It is recommended that all phones be placed on silent.
- To maintain a productive and respectful environment, consequences will only be considered for repeated disruptions that significantly hinder progress, such as a persistent refusal to participate in discussions and project work.

Timetable

Timeline of Project

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				01-Mar	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
01-Apr	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	01-May	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16			

	Deadline
	Start of new month
	group physical meetings
	app team meetings
	network team meetings
	both teams had meetings

Continuous Reporting

The work divisions were as follows:

Member	Task and Responsibility
Salim Sofinia	Text Messaging App (core app) Documentation
Connor Callison	Text Messaging App (core app) Documentation
John Crouse	Text Messaging App (core app) Documentation
Kanayochi Okeke	Text Messaging App (core app) Documentation
Blessing Baloyi	Packet Tracer Network Documentation Budget
Angelina Ramsunar	Packet Tracer Network Documentation Budget
Britney Soya	Packet Tracer Network Documentation Budget
Kamogelo Taueatsoala	Packet Tracer Network Documentation Budget
Mixo Malepfane	Packet Tracer Network Documentation Budget

Group 11 meeting report

The following are dates of when we all gathered (both teams) to work on the project:

Meeting date	Meeting Details
Monday, 4th March	**Purpose:** 1. Meet and greet. 2. Discussion of project requirement
	Session Notes: 1. Met and gathered as a group. 2. Introductions and general discussion. 3. Divided into two groups. App development team and Packet tracer team
	Attendance list: All group members attended
Monday, 18th March	**Purpose:** 1. Courses update and reflection
	Session Notes: 1. We checked how far everyone was with their online courses. 2. Made sure everyone understood what was done in the courses. 3. The reflections of the courses needed to be done
	Attendance list: All group members attended

Tuesday, 2nd April	**Purpose:** 1. Progress on the packet tracer drafts. 2. Collection of reflections 3. Timeline and discussion of roles

	Session Notes: We separated into an app team and packet tracer team. Assigned everyone with a part in the project. 3. Network teams tasks were assigned. 4. App team tasks we assigned. 5. Everyone had their reflections done and we added it to the document
	Attendance list: All group members attended
Monday, 6th May	**Purpose:** 1.Progress check 2. Both teams needed to be done halfway with the project
	Session Notes: **Network Team:** 1. They made progress by watching you tube videos and started with the template of the topology as well as setting up the offices. 2. The other rooms were also attempted. **App Team:** 1. Able to send a message from one user to another, except they couldn't send from one laptop to another, as a host was required. 2. Also left with refining the GUI and making it more user-friendly
	Attendance list: All group members attended

Friday, 10th May (online)	**Purpose:** 1. Informing both teams on our progress 2. The documentation

	Session Notes: **Network team:** 1. They had struggles with internet connection and a few configurations. 2. The packet tracer was doing their parts of the documentation. **App team:** 1. They had inconsistent messages and needed to find a way to fix it. They all got together after this meeting to sort the issue. 2. The app team did their parts of the documentation
	Attendance list: All except Blessing (he was excused he was at a doctor's appointment)
Monday, 13th May (final meeting)	**Purpose:** 1. Evaluate both projects against rubric. 2. Evaluate documentation against rubric. 3. Discuss presentation
	Session Notes: 1. Packet Tracer network satisfies all requirements. 2.Text Messaging app satisfies all requirements. 3.1 Blessing to present Packet Tracer 3.2 Salim to present the app
	Attendance list: All except Kanayochi (he was excused he was at the police station)

Meeting Report

Packet Tracer Network Team Meeting Report

Network member: Blessing Baloyi (41136063), Britney Soya (40921050), Angelina Ramsunar (41081269), Kamogelo Taueatsoala (42913470) and Mixo Malepfane (42005248).

10 April 2024

- Presentation of prototype of Packet Tracer.
- Best prototype was chosen as the packet tracer to continue to work on.

13 April 2024

- Discussed the overall architecture of the network and the requirements.
- Tasked to do individual research on their selected sections about the network implementation in preparation of the next meeting.

17 April 2024

- All devices needed were placed.
- Configuration of IP addresses was completed.

24 April 2024

- Connections from devices to switches and access points were done.

27 April 2024

- Implementation of IP addresses using DHCP in the machine room/server room was done and completed.
- Set up and configuration of all IoT devices.

7 May 2024

- Setup and configuration of all types of servers.

10 May 2024

- Interlinked the entire network by connecting a couple of switches located in all of the rooms to the switches in the machine room/server room, which obtains the router and main switch, in which the servers are connected to.

14 May 2024 (Penultimate Day)

- Review of the entire Packet Tracer network.

15 May 2024 (Final Day)

- Made its appearance more appealing, cleaner and understandable.

Text Messaging App Team Meeting Report

App team members: Salim Sofinia (37284177), Connor Callison (37746243), John Crouse (37489917) and Kanayochi Okeke (40864197).

11 April 2024

- Discussed final tweaks to the GUI design.
- Finalised using C# code and using the .NET framework.
- Delegated pairs to work on backend and front-end research.

15 April 2024

- Continued refining the GUI layout.
- Debugged issues related to text formatting on the client side.

25 April 2024

- Focused on button functions and their integration.
- Ensured smooth communication between client and server.

5 May 2024

- Collaborated on handling clients within the server.
- Addressed error handling mechanisms.

10 May 2024

- Conducted comprehensive code testing and app portability.
- Made necessary adjustments based on testing results.

14 May 2024 (Penultimate Day)

- Reviewed last-minute changes and improvements.
- Reviewed C# code for the client-side messaging functionality and parsing.

15 May 2024 (Final Day)

- Completed all remaining tasks.
- Ready for deployment.

Task Completion record

The project rubric's components served as a guide for us as we collaborated to complete the entire project.

Packet Tracer Network Milestones:

Task	Completion date	Delegation
Sections isolation	13 May	Whole Packet Tracer Network team
Printers accessible in their own sections	27 April	Whole Packet Tracer Network team
If DHCP was not used: the subnets are appropriate for the associated sections	1 May	Whole Packet Tracer Network team
Network allow for the indicated growth	10 May	Whole Packet Tracer Network team
All of the devices are shown	17 April	Whole Packet Tracer Network team
Network is capable of connecting to the Internet through a single fibre connection	5 May	Whole Packet Tracer Network team
For a random selection of devices: all of the devices are connected to the Internet gateway device	7 May	Whole Packet Tracer Network team

Text Messaging App Milestones:

Task	Completion date	Delegation
App running on windows OS	15 April	Whole App team
App does not have installation libraries	17 April	Whole App team
Internet based messaging	25 April	Whole App team
user-friendly GUI and HCI compliance	15 April	Whole App team
Receive and send peer to peer messages	5 May	Whole App team
Receive and send Group messages	5 May	Whole App team
App is portable	10 May	Whole App team
Building worst case scenario test cases to break and fix app	13 May	Whole App team

Individual group member reflections

41136063 - BT Baloyi

The courses I completed on Udemy have significantly expanded my knowledge base and equipped me with valuable skills applicable across various fields. These experiences have underscored the importance of continual learning and skill development in today's rapidly evolving professional landscape.

From the Time Management mini-course, I gained insight into essential soft skills such as discipline, prioritisation, and strategic planning. Particularly, the concept of the morning ritual outlined in Hal Elrod's 'The Miracle Morning,' which includes SAVERS practices, resonated with me, emphasising the importance of starting each day on the right foot.

Additionally, the Project Management course provided invaluable insights into project lifecycles and methodologies, while the Git course emphasised the need for consistency and adaptability in workflow management, elucidating the three states of Git—working directory, staging area, and repository.

The 'Git Expert in 4 Hours' course deepened my understanding of Git as a distributed version control system, enhancing my proficiency in team-based software development and command line interface usage.

Finally, exploring Cisco Packet Tracer on SkillsForAll strengthened my technical skills and comprehension of networking principles. Through practical exercises, I honed my abilities in simulating networks, gaining a deeper understanding of network environments, routing protocols, and network security.

Overall, these courses have empowered me to navigate challenges confidently in both personal and professional spheres, equipping me with the knowledge and skills necessary to succeed in this collaborative project.

40864197- KE Okeke

Having completed the courses, I now possess an array of soft skills that I'm eager to leverage in my upcoming group project. From the time management course, I've picked up invaluable strategies for prioritising tasks and maintaining a balanced schedule, which I plan to implement to ensure timely completion of project milestones.

In the Git and GitHub courses, I've cultivated strong communication and collaboration skills that I intend to utilise when working with my project team. Clear communication and attention to detail will be paramount in ensuring smooth collaboration and effective version control throughout the project.

Drawing from the project management courses, I've developed leadership and problem-solving abilities that I'm excited to apply as a member of the project team. I aim to lead by example, delegate tasks effectively, and navigate through challenges with confidence, contributing to the overall success of the project.

While I haven't yet had real life hands-on experience with Cisco Packet Tracer, the foundational skills acquired from the course will be invaluable in addressing any networking challenges that arise during the project. I plan to leverage my critical thinking and problem-solving abilities to troubleshoot issues and devise innovative solutions, thereby enhancing the project's technical outcomes.

In summary, I am enthusiastic about applying the soft skills I've acquired from the courses to my group project. By leveraging effective time management, communication, collaboration, leadership, and technical skills, I am confident that I can make a meaningful contribution to the project's success and achieve our collective goals.

42913470 - Kamogelo Taueatsoala

The courses I've undertaken have improved my skill set in various aspects crucial to my academic and professional journey. The time management course has helped me to understand the value of each moment. I've learned to optimise my workflow, which will result in better outcomes achieved in less time.

Moreover, by learning Git and GitHub I learned the process of tracking changes and managing code, which will be used in my upcoming/current projects to enhance teamwork efficiency and maintain project integrity.

Additionally, the project management course boosted my confidence to work in group settings and enhanced my understanding of project planning, executing, monitoring, and controlling. I also gained familiarity with Primavera P6. I plan to actively participate in collaborative projects and apply project management methods to a variety of situations.

Lastly, the Cisco Packet Tracer course enhanced my understanding of networking concepts and protocols. Through the real-world simulation, I gained knowledge in configuring and troubleshooting network systems, effectively preparing me for challenges in the field.

I intend to refine these skills through practical applications and further education in the future. I have gained a significant amount of knowledge through these courses. By utilising time efficiently and collaborating effectively with my group members, I am now approaching tasks from a strategic standpoint.

41081269 - Angelina Ramsunar

These online courses have taught me a lot about various kinds of soft skills that are essential for both professional and personal development.

Effective time management is essential for both personal and professional endeavours. The time management training offered strategies for effectively managing distractions, setting objectives, and prioritising work. I developed time management skills that increased productivity and decreased stress.

Effective communication is essential to teamwork and the accomplishment of projects. The project management classes placed a strong emphasis on the value of precise and succinct communication to assign work, transmit ideas, and effectively settle disputes. I developed improved communication skills and attentive listening skills, which will improve teamwork.

I learned what project management consists of and the phases that need to occur for the project to be successful.

Problem-solving: By navigating version control issues and resolving disagreements in code repositories, Git and GitHub courses taught me how to solve a few problems. These abilities allow me to tackle problems and come up with creative solutions in a variety of situations.

I learnt how to work in Git/ GitHub and use all the applications with Git/GitHub for building projects.

Adaptability: The Cisco Packet Tracer training made me aware of how crucial it is to be flexible in the digital age, as technology is changing quickly. I discovered how to embrace new tools and technology, keep up with business trends, and never stop improving my skills.

Cisco packet tracer taught me how to build small networks such as networks for an office and how to experiment with the tools that they have.

42005248-MixoMalepfane

In completing the series of online courses, I've acquired valuable skills that are helping me grow both academically and improve my ability to work as a team. These courses covered a range of topics, from time management to technical skills like using GitHub and Cisco Packet Tracer.

Firstly, the course on time management taught me how to make the most of my time. I've learned to prioritise tasks, ensuring I have time for all my modules and projects. This skill has made me more efficient in completing my projects while still having time to prepare for tests and exams.

Next, learning about GitHub and Git through the courses has improved my technical abilities. I now understand how to use version control for my coding projects, making collaboration easier and more organised. Additionally, exploring Cisco Packet Tracer has given me insight into building digital networks, which is both educational and entertaining.

Beyond technical skills, these courses have also helped me develop soft skills that are essential in many aspects of life. Working on group projects improved my teamwork and communication skills. I learned how to effectively communicate ideas and collaborate with others to achieve common goals.

40921050 - Britney Soya

After completing the online Udemy courses and the Cisco Packet Tracer course, I acquired a range of soft skills that are crucial to my professional growth and effective teamwork.

The Manage Your Time Udemy course aims to equip you with practical strategies to manage your time effectively. You will learn about techniques like prioritisation: techniques to identify and focus on the most important tasks. Goal setting: setting clear and achievable goals to guide your time management. Planning and scheduling: creating schedules that allocate time for your priorities. Dedicating specific blocks of time to specific tasks. Overcoming procrastination: strategies to tackle tasks you might be inclined to avoid.

Furthermore, the Get Started with GitHub Udemy and Git Expert Udemy courses helped improve my technical skills while emphasising the need for communication and teamwork when working on projects. I learned the basics of Git and GitHub. Git Started with Git Hub was all about learning communication and collaboration skills as you learn version control systems used for software development projects. Git Expert was about learning problem-solving skills as you delve deeper into Git functionalities.

Project and Project Management was all about learning communication, collaboration, and time management skills as you explore the various aspects of project planning and execution. While the focus is on technical skills related to network design and troubleshooting, you will develop soft skills like critical thinking and analysing network configurations to identify and solve connectivity issues and problem-solving: following a logical approach to diagnose and fix network problems.

37489917 – John Crouse

I gained a variety of soft skills by completing these online Udemy courses and the Cisco Packet Tracer course that are essential to my professional development and productive teamwork.

Firstly, I learned the value of time investment, prioritisation, scheduling, routine development, and goal setting from the Manage Your Time Udemy course. It is essential to develop time management skills and reduce distractions if you want to increase productivity and meet deadlines.

Secondly, the Git Expert and Get Started with GitHub Udemy courses sharpened my technical abilities while highlighting the value of cooperation and transparent communication when working on a project as a team.

Thirdly, I gained a solid understanding of project management techniques such as planning, execution, assessment, scheduling, and critical pathing from the Project & Project Management Udemy course. To complete tasks on time, manage time and resources, and deliver effective projects, it is crucial to understand project lifecycles and the responsibilities of the project manager.

Lastly, taking the Cisco Packet Tracer course improved my technical simulation and networking skills. Acquiring technical skills from Cisco Packet Tracer enhanced not only my networking ability on my own but also the way I collaborate in solving problems as part of a project.
Overall, these online courses strengthened and helped me build essential soft skills. My technical proficiency, communication, time management, and project management all improved because of these classes. My effectiveness and productivity in next tasks will undoubtedly be impacted using these new skills. This will ensure my success in the workplace in the near future.

37746243 - Connor Callison

After completing the five courses I have learned multiple soft skills. In the first course manage your time I have come to realise that it's curtail to manage your time effectively, some soft skills I have learnt are to have self-discipline, how to create a mini ritual, to remain focused in uninterrupted time and not to get distracted and as well as to prioritise myself over others. By watching Getting started with GitHub and the expert Git I have learnt multiple soft skills. The three main skills I have learnt are: communication, teamwork as well as problem-solving. Making use of this taught me the ability to engage in my group project, as well as the ability to communicate ideas clearly to one another and provide constructive feedback as well as restive feedback. Project management I have learned to better my teamwork, communication, and problem-solving soft skills. Alongside these skills I have learned how to lead and contribute effectively with our project to come. It has taught me to manage and complete as well as to stay ahead of the deadline to effectively complete the project to the best of our ability. Cisco packet tracer has taught me multiple soft skills. It has taught me to collaborate with peers on networking projects, it has increased my communication and teamwork skills. Working through troubleshooting has improved my problem-solving and patience. Cisco packet tracer has also prepared me and my skills for the real-world networking challenges.

37284177- Salim Sofinia

The time management course emphasized investing time wisely, setting priorities, scheduling, developing routines, and setting goals. I've learned how crucial effective time management is for productivity and meeting deadlines. This course has provided practical strategies to balance multiple tasks efficiently.

The Git and GitHub course enhanced my knowledge, highlighting ease of use and technical intricacies. I mastered basic commands like pull and push, and project collaboration practices. I'm proficient in using branches and resolving conflicts, and I gained insights into advanced Git features and best practices for version control.

The Project and Project Management course provided a solid foundation in techniques such as planning, execution, assessment, scheduling, and critical path method (CPM). I learned to break down projects into manageable tasks, allocate resources, and monitor progress to ensure timely completion.

The Cisco Packet Tracer course improved my technical simulation and networking skills. I became familiar with Cisco Packet Tracer, experimented with simulations on a home network, and learned to design, configure, and troubleshoot network setups. This hands-on experience deepened my understanding of network protocols and configurations.

In summary, these courses equipped me with essential knowledge and foundational skills necessary to excel in my project assignments. The combination of time management, version control, project management, and technical networking skills has prepared me to tackle complex projects with confidence and efficiency, ensuring high-quality results in my future endeavours.