KWANTLEN POLYTECHNIC UNIVERSITY

INFO 2416 – Summer 2024

PROJECT HANDOUT
Term Project

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Section: A11
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"This project, all names, characters, and incidents portrayed herein are fictitious. No identification with actual persons or fictitious characters should be inferred. No animals were harmed in the making of this project."

OVERVIEW

This topic will involve analysis of a business case and the design of a network to support it. The precise details of the business case are below. For the project you will be required to:

a.   Create an organization chart for the business.
b.   Provide cost data for the system's hardware, software and licenses, including references for your prices.
c.   Design and document the organizational units, security groups, and shared folder configuration that you will need.
d.   Configure Windows Server 2022 for the business, including DNS, folder/file sharing and printer sharing. e. Implement the OU and security group plan.
f.   Add a folder redirection GPO.
g.   Create an IT Department web page for the business, and deploy it using IIS server.
h.   Submit a report including screenshots verifying every aspect of the implementation. You should also describe what work would be needed from this point to actually implement your system in real life.

Part 2: Active Directory Plan   **Due: July 23**

For Part 2 you will describe your Active Directory design, including:

•   a description of the all organizational units you plan to implement (make sure you have at least a Medical Staff OU), and a list of each OU's members
•   a list of the shared folders that will be part of the system, and what your understanding is of the types of documents each folder should contain; they include Medical Records, Financial Records (for the running of the care home), Resident Records (for documents related to the residents and billing), and Admin Docs (documents relating to the administrative aspects of running the school; for example, policies, staff contracts, correspondence with external agencies, and so on)
•   a description of an appropriate permission structure for the users; for each of the four folders, describe who should have access; be sure to explain your decisions regarding assigning permissions (for this project, permissions should be either Full or None)
•   a diagram showing an AGDLP-compliant security group structure for access to the shared folders
•   a list of the security groups you plan to implement, and a list of their members

Active Directory Plan for Tony's Retirement Institute and Care Home (T-RICH)

1. Organizational Units (OUs) and Members

For our Active Directory (AD) design, I will create organizational units that reflect our organizational structure. This will facilitate efficient management of resources, permissions, and group policies. Here's a breakdown of the OUs:

Medical Staff OU

Members: Stephen Strange (manager/head of department), Peter Parker, Michelle Jones-Watson, Ned Leeds, Drax, Thanos, Scott Lang, Hope Van Dyne
Description: This OU contains all personnel involved in medical care, including physicians, nurses, and therapists.

Support Staff OU

Members: Kevin Feige (manager), Stan Lee, Nick Fury, Carol Danvers, Bruce Banner, Steve Rogers, General Office Worker 1, General Office Worker 2
Description: This OU includes personnel responsible for support roles such as HR, supplies, operations, billing, resident records, and food services.

IT Department OU

Members: Me (IT Technician), KPU Instructor
Description: This OU is for the IT personnel managing the technology infrastructure.

Admin OU

Members: Pepper Potts (Business Partner), Tony Stark (Owner)
Description: This OU includes top management and administrative staff who oversee the operations of the entire organization.

2. Shared Folders and Document Types

The shared folders are structured to facilitate access control and efficient document management. Each folder is dedicated to a specific type of document and purpose:

Medical Records Folder

Documents: Patient medical histories, treatment plans, medical test results.
Usage: Accessible to medical staff with full access for updating and referencing patient care documents. Top Management also has full access for oversight and compliance purposes.

Financial Records Folder

Documents: Financial transactions, budget plans, payroll records.
Usage: Accessible with full access to support staff responsible for financial management and accounting. Top Management also has full access to these records for strategic planning and oversight.

Resident Records Folder

Documents: Resident personal details, billing information, care plans.
Usage: Support staff have full access to manage resident information and billing. Medical staff have no access to avoid data breaches. Top Management has full access for monitoring resident care and ensuring compliance.

Admin Docs Folder

Documents: Organizational policies, staff contracts, correspondence, external agency communication.
Usage: Top Management has full access to handle administrative tasks and external relations.

3. Appropriate Permission Structure

The permission structure is designed to ensure that users have access to the necessary folders and documents relevant to their roles while maintaining security and data integrity. Permissions are set to either full access or none, adhering to the project's requirements.

Medical Records Folder

Access:
Full Access: Medical Staff, Top Management, IT Department, Managers
No Access: Support Staff
Explanation: Medical staff need full access to update and reference patient care documents, while top management requires access for oversight and compliance. Support staff do not need access to these sensitive records.

Financial Records Folder

Access:
Full Access: Support Staff, Top Management, IT Department, Managers
No Access: Medical Staff
Explanation: Support staff manage financial operations and require full access, while top management needs to monitor financial health and make strategic decisions. Medical staff do not need access to financial records.

Resident Records Folder

Access:
Full Access: Support Staff, Top Management, IT Department, Managers
No Access: Medical Staff
Explanation: Support staff handle resident information and billing, necessitating full access. Top management needs access for oversight and compliance. Medical staff are restricted to prevent data breaches related to resident billing information.
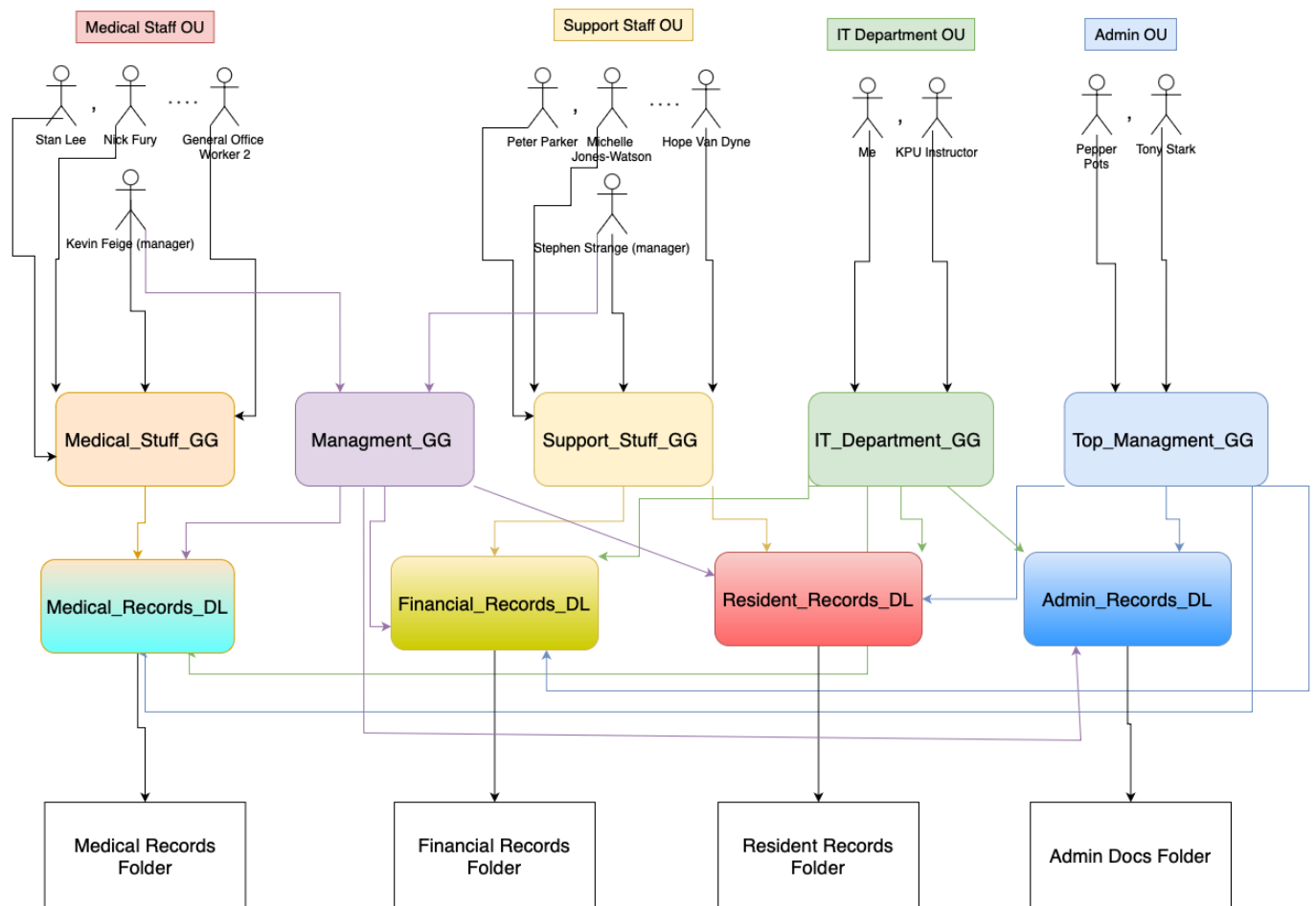
Admin Docs Folder

Access:
Full Access: Top Management, IT Department, Managers
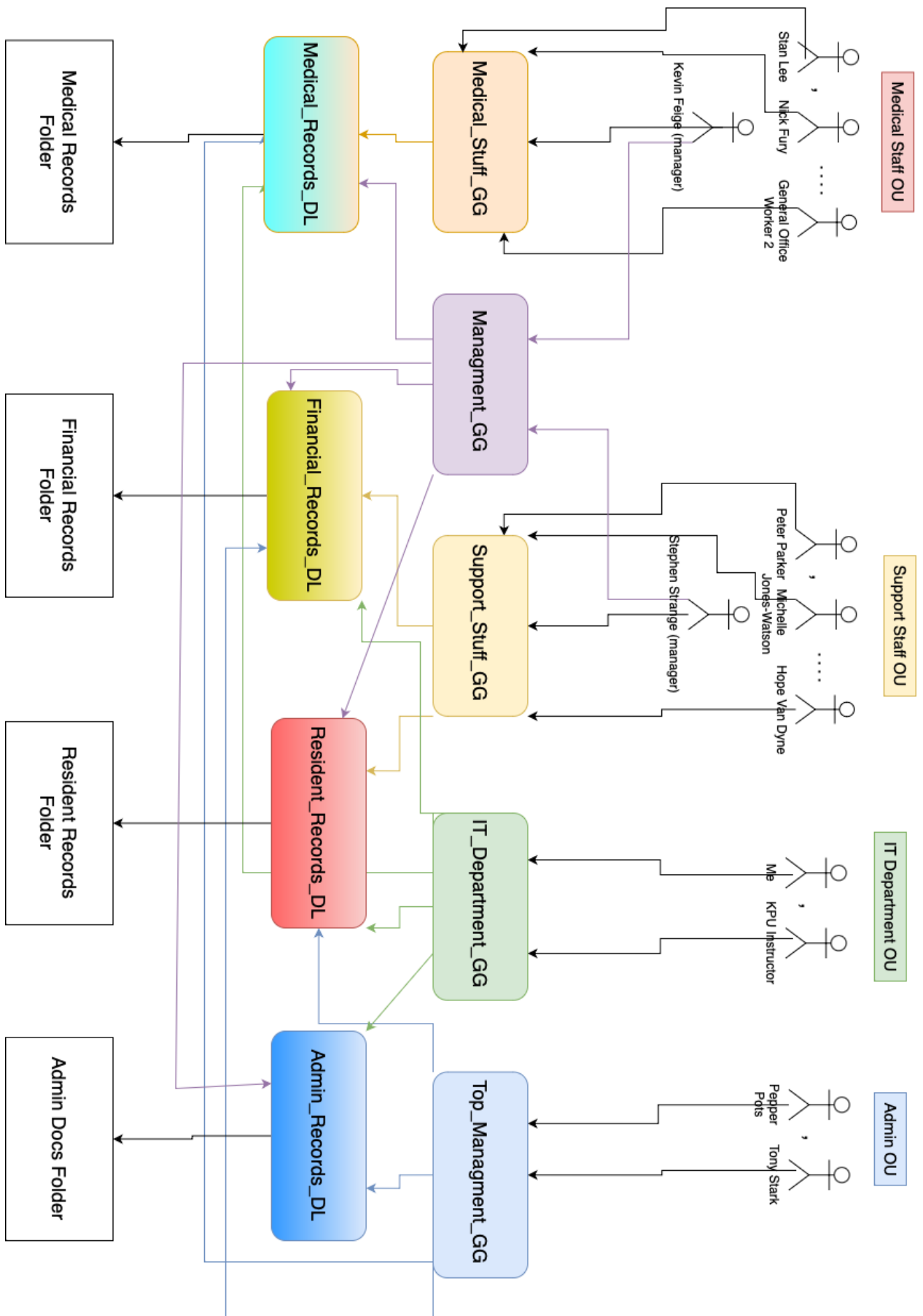No Access: Medical Staff, Support Staff
Explanation: Top management manages administrative tasks and external relations, requiring full access. Other staff members do not need access to these documents.

        This setup makes sure each group can access the documents they need for their jobs. Following the principle of least privilege keeps data safe by limiting access to sensitive information to only those who really need it.

4. Diagram

On the next page I included it in a bigger size, I rotated it so it could fit.

Medical Records Folder

Medical_Records_DL

Medical_Stuff_GG

Stan Lee

Nick Fury

Kevin Feige (manager)

General Office Worker 2

Medical Staff OU

Managment_GG

Financial Records Folder

Financial_Records_DL

Support_Stuff_GG

Peter Parker

Michelle Jones-Watson

Stephen Strange (manager)

Hope Van Dyne

Support Staff OU

Resident Records Folder

Resident_Records_DL

IT_Department_GG

Me

KPU Instructor

IT Department OU

Admin Docs Folder

Admin_Records_DL

Top_Managment_GG

Pepper Pots

Tony Stark

Admin OU

5. List Of Security Groups

To ensure secure and efficient access management within Tony's Retirement Institute and Care Home (T-RICH), we have designed a comprehensive Active Directory (AD) security group structure following the AGDLP framework.

Global Groups:

Medical_Staff_GG:
Members: Includes all medical personnel such as physicians, nurses, and therapists responsible for patient care.

Support_Staff_GG:
Members: Encompasses roles in support functions including HR, operations, billing, and resident records management.

Top_Management_GG _GG:
Members: Consists of top management and administrative staff overseeing organizational operations and compliance.

IT_Department_GG:
Members: IT personnel responsible for managing technology infrastructure and support.

Management_GG:
Members: Includes departmental and facility managers overseeing various operational aspects at T-RICH.

Domain Local Groups (DL):

Medical_Records_DL:
Members: Combines Medical_Staff_GG, Top_Management_GG, Management_GG and IT_Department_GG for access to patient medical histories, treatment plans, and test results.

Financial_Records_DL:
Members: Includes Support_Staff_GG, Top_Management_GG, Management_GG and IT_Department_GG for managing financial transactions, budgeting, and payroll records.

Resident_Records_DL:
Members: Includes Support_Staff_GG, Top_Management_GG, Management_GG and IT_Department_GG for handling resident personal details, billing information, and care plans.

Admin_Records_DL:
Members: Exclusive to Top_Management_GG, Management_GG and IT_Department_GG for accessing organizational policies, staff contracts, and external communications.

Conclusion

The idea of this whole structure is that regular staff can access only folders which are designated to their department, managers can access all folders because sometimes they would need to make a quick decision and they would not need to wait to get that data, top management also have access to all folders because they should be able to see what is going on in their company and IT department has access to all folders so they can fix errors which may occur. I agree that this structure may be seemed as not that secure and overcomplicated, but this is the best way in my opinion. It allows to be more creative; no delays and it would cause more brainstorms what can benefit to company.