

TAGORE MEDICAL COLLEGE & HOSPITAL

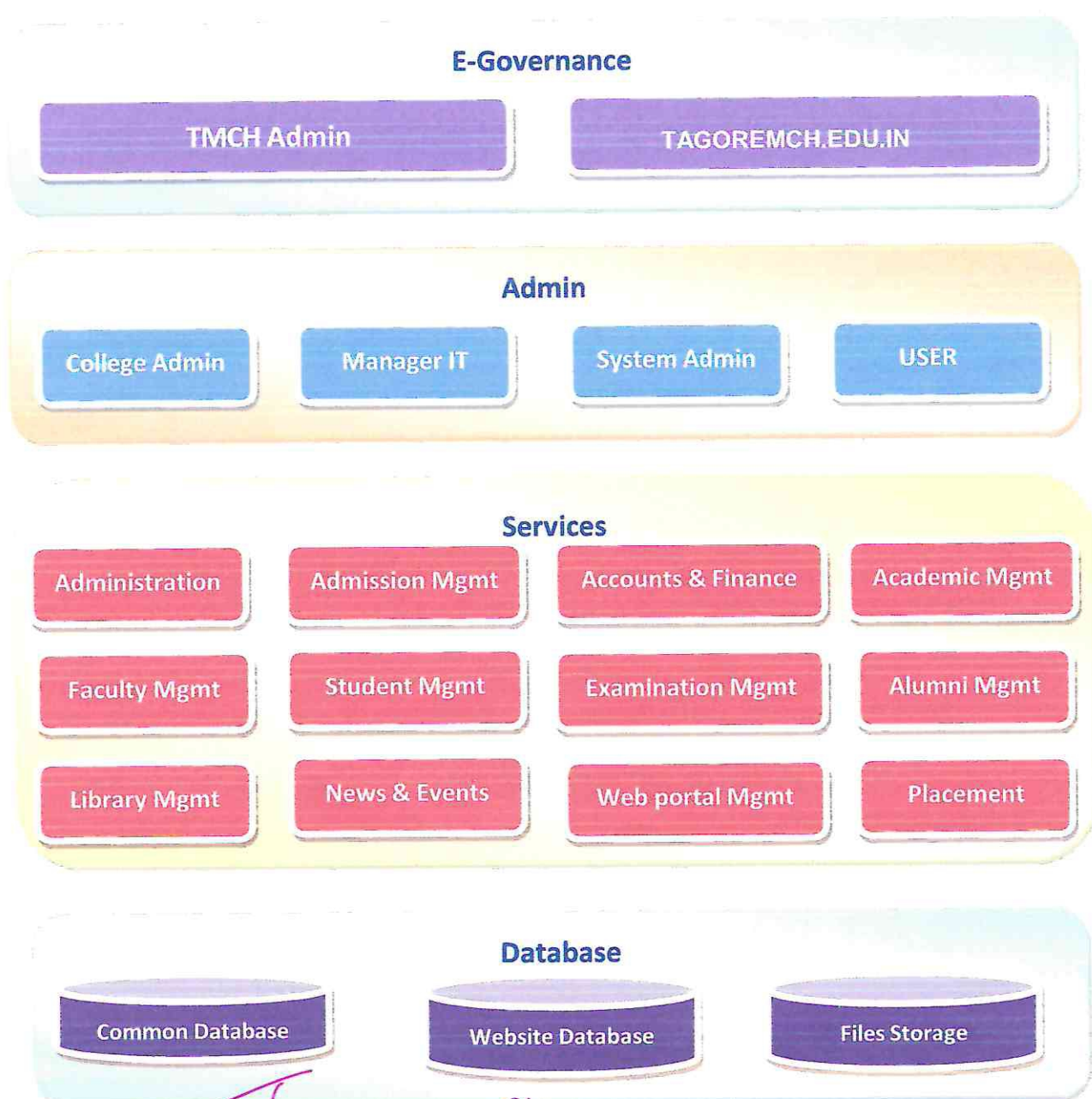
E-GOVERNANCE REPORT


DEAN
TAGORE MEDICAL COLLEGE & HOSPITAL
RATHINAMANGALAM, MELAKOTTAIYUR POST,
Chennai-600 127.



Involvement of leadership in developing E-Governance strategies for the institution

E-Governance Architecture



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The following e-governance strategies have made the systems more efficient:

Improved communication:

Our institute has a wireless lease line for internet connectivity that offers a high-speed wireless network to the students and staff of the campus at speeds of up to 1 GBPS (1000 MBPS). With over 1 km of fibre optic/ local area network structure, the campus gets a high speed internet facility.

Paper-less notices:

All faculty, students and staff have unique domain email IDs with a Google based facility. Both these features enable quick communication between all stakeholders through intra-mail. Urgent messages are communicated on email and it has changed the work culture of the medical college.

Efficient management information system for record keeping of employees

TMCH has made administrative tasks more efficient and transparent by installing different modules. These are – Administration, Accounts and Finance, Academic management, Student management, Examination management, Alumni management, Library management, News and Events, Our Institute Web-portal management, Placement.

The modules involved in MIS are for following activities -

- Biometric attendance of all employees and all employees service details including leave records are linked electronically to accounts section (payroll)
- The record of student attendance is maintained electronically on an online system. The marks obtained in different subjects as part of internal assessment are communicated to the health university as an electronic file.


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Automation of inventory and stock management:

TMCH has specific modules for automating the routine workflow of hospital pharmacy, purchase, inventory management and distribution of various drugs, sutures and surgical items to outpatient pharmacy, inpatient pharmacy, wards and operating rooms in the entire hospital. The system ensures that the pharmacies are well-stocked. We have created transparency, better monitoring and complete control over the drug distribution in the hospital.

Automation in accounts section:

The Our Institute provides general ledger, accounts payable, accounts receivable, fixed asset, and cash management solutions enabling a current, consolidated, and fast view of the financial status of the organization at any point in time. Payments received from patients, and payments paid to vendors, salaries are electronically generated, tuition and hostel fees now take an electronic route and all transactions can be tracked and easily posted to the General Ledger system to reflect their effect on accounts and financial reports.

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Hospital Information Management System Software

Architecture Document

For

Tagore Medical College & Hospital, Rathinamangalam, Chennai

TFC Solutions

Sujatha Complex

No. 18/10, 1st Floor,
3rd Main Road Postal Colony,
West Mambalam


Chennai – 600 033

Website: www.tfcsinfo.com



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1.1 Executive Summary

Tagore Medical College & Hospital (TMCH), is located in Rathinamangalam – Melakottaiyur Chennai – 600 127 , has its main focus on welfare of nearby villages & also a Multispecialty Hospital catering to the needs of outpatients and inpatient. It also has Clinical Laboratory, Radiology, Blood Bank and all Specialties department with in itself. The hospital is being established and it is managed by highly qualified professionals aiming at quality services and hospitality.

The HISMAN – Hospital Information Management System Software has been customized and enhancement of Hospital Management System Reporting made effectively,. This is providing a solution to maintain their business activities effectively and efficiently without lapse. The return on Investment for the **TMCH** will be in terms of lesser human interventions and effective information flow around the Hospital.

TFCS's expertise and experience in handling project for other global clients and India corporate enable us to ensure a quick and smooth delivery of the software solution. TFCS has provided the technical (developmental) expertise with functional experts in areas of Business Integration. The Annual Maintenance contract is renewed in every 12 months and it is live till date..

1.2 About TFCS

TFCS is a software solution company that provides complete software application development, integration and management solutions.

Since its inception in 1999, **TFCS** has focused on and gained experience in the evolution of end to end solutions and strategic consulting for client server and internet initiatives, with a combination of technical and structural capabilities. **TFCS** provide a mix of project management and consulting service to their customers to provide more value to their businesses through IT enablement.

Its optimal size allows **TFCS** to quickly learn, assimilate and adopt cutting edge technology combine that dynamism with a strong orientation to developing customer specific solutions and you have a best-of-breed solutions provider with a proven track record in the Middle East and Asian markets.

TFCS' s strengths include:

- ❑ **The expertise gathered over six years in providing clients server and e-business solutions**
- ❑ **Over 50 projects done for domestic and overseas clients**


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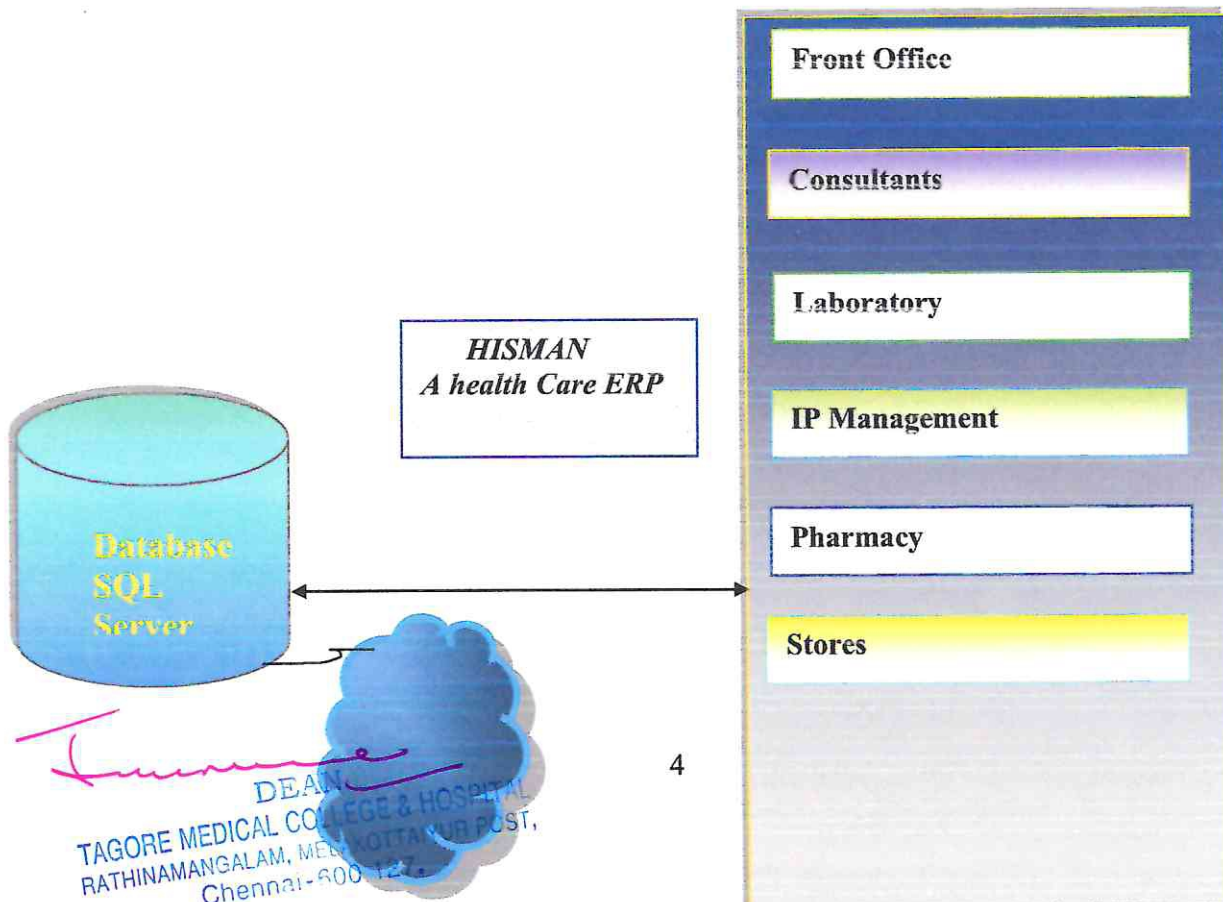
- ❑ A demonstrated ability to service and overseas clients
- ❑ Availability of high quality technical manpower
- ❑ Demonstrable cost competitiveness
- ❑ Ability to do multilingual solutions
- ❑ Experience of managing software solutions

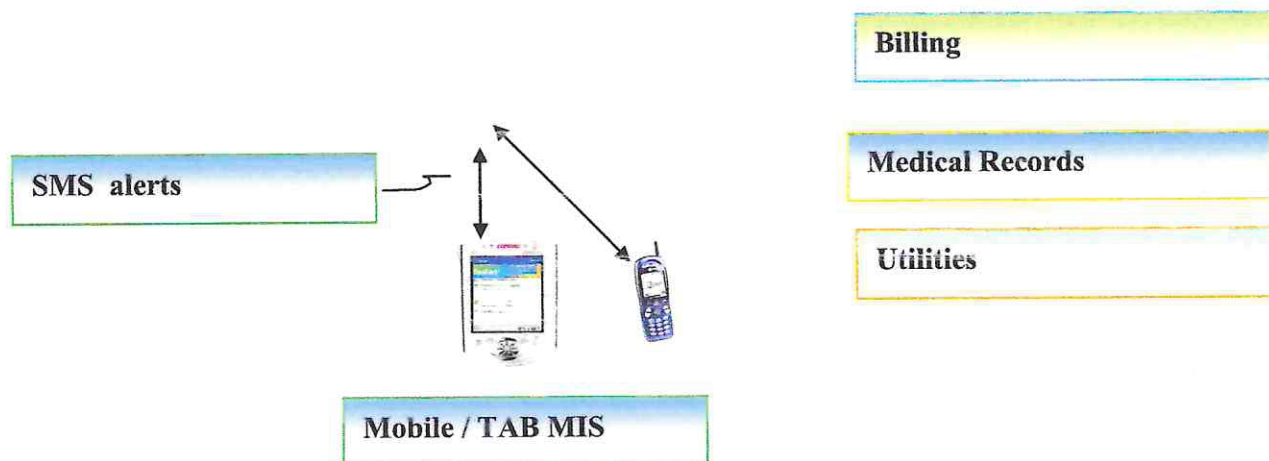
1.3 Quality Management System (QMS) of TFCS

The QMS defined for each project at plan stage itself, which includes TFCS's Global Minimal corporate Objectives for project Management: Rework activity will be restricted within 15% No product will be delivered to the Customer with any Critical Defect Customer Complaints will be attended within 48 Hours.

4.1 Solution Architecture

TFCS Solutions





4.2 Software Architecture

Application environment / layer

- DOT NET / VB

Database

- MYSQL, MSSQL server

Operating system

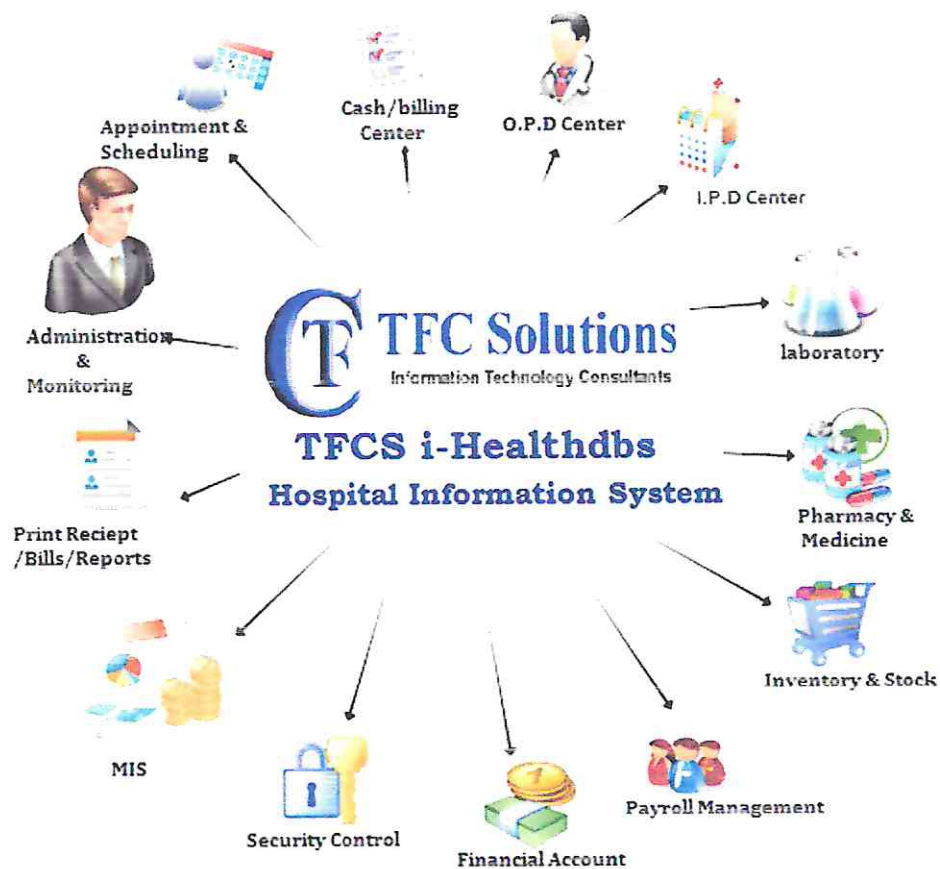
- MS Windows 2012/2008

Reports

- HTML, PDF, Crystal Report generator

In a multi-user setup with multiple touch points, as is the case with **TMCH**, all machines that interact with the system will be through browser / application software and be networked to a central Database server.

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System Security

System security will be ensured with well-defined User Access levels. Domain Controlled / with user level access restrictions and Audit trails.


Requirement at Client 's side for Installation and Customization

Server 1

- ☐ Intel Xeon Processor E 2104G CPU with dual Power supply and 2 Ethernet ports
- ☐ 16 GB RAM
- ☐ 3* 1 TB Gb Hard disk
- ☐ 100/1000 Mbps Network adapter
- ☐ 18.5" Color Monitor
- ☐ Keyboard and Mouse

Server 2

- ☐ Intel Xeon Processor E 5 2609 CPU with dual Power supply and 2 Ethernet ports


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- ❑ 64 GB RAM
- ❑ 3* 1 TB Gb Hard disk
- ❑ 100/1000 Mbps Network adapter
- ❑ 18.5" Color Monitor
- ❑ Keyboard and Mouse

Client

- ❑ Pentium / i3 Processor / i5, i7
- ❑ 250 Gb Hard disk (Min) / 500 GB HDD
- ❑ 2 GB RAM / 4 GB RAM / 8 GB RAM or more
- ❑ 100 / 1000 Mbps Network Adapter
- ❑ 15" Color Monitor
- ❑ Keyboard and Mouse

Software

- ❑ Operating System Windows 2003/2008 /2012– Server Client –Win 10 / Win 8 / 7
Linux,

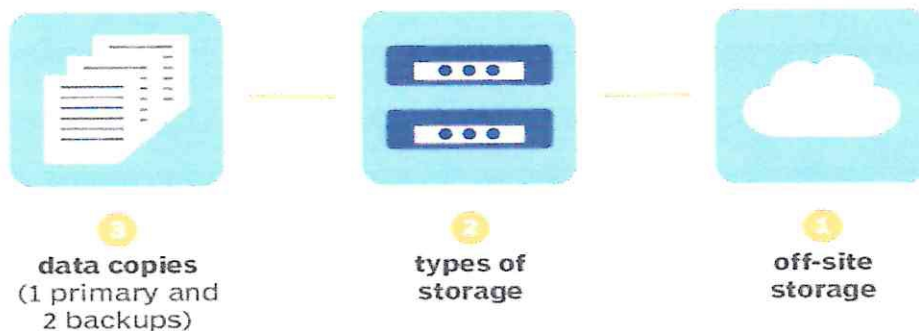
Network

Local Area Network available with 100 /1000 Mbps switches and Wireless points are available all over the campus to work in the software.

Peripherals, Printers, Scanners, Barcode Printers, Stickers & Tags

5.0 Backup Strategy

3-2-1 backup strategy steps



Storage options

Backup storage options include disk, tape and the cloud. Each have their advantages and disadvantages. As the 3-2-1 rule of backup shows, using a combination of media types is smart.

Disk-based backup is typically among the most economical options, but it's also fast. Because it physically lives in an office, it's susceptible to damage in the event of a natural disaster.

Cloud backup runs cheaper, but only to a point, as it depends how much data your organization is protecting. The cloud gets expensive over time and as volumes grow. It can also take a long time, compared with an on-site option like disk, to pull data out of the cloud, depending on bandwidth and volume. It's off site, so safe from a disaster at the data center, but it's also online, so it's still vulnerable to a cyber attack.

Though tape is more commonly used for archival purposes now, it's still a backup option. Its advantages include security, as it's inherently offline, so it's safe from cyber attacks. The latest tapes store a high volume of data -- 30 TB of compressed capacity in LTO-8. They require maintenance and management to ensure they are safe and secure -- for example, having them transported to an Iron Mountain facility. Tape speed has improved over the years, but on-site disk is typically faster for recovery purposes.

So in TMCH backup is automated to the external disk on daily basis and to another location in a separate server on daily/weekly basis.

6.0 High Availability

Backup and alternate server is maintained in the campus with 24hrs support makes high availability of data and software which is minimizing the downtime of software and information..

7.0 Annual Maintenance Contract

Roles & Responsibilities

All Guidance, Support and Assistance will be Phone / Remote & in Person – Direct Visit to site as and when required apart from regular visit on every Month.

Assistance in Orientation.

Assistance in Utilities.

Assistance in Software related Issues.

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Guidance / Assistance in formulating new ideas / Forms Periodical visit – As when Required.

Maintenance of Data & Back up- Separate machine to have automated back up without any intervention of any other packages or work.

Guiding in handling emergencies in software on failure of Network & Electrical issues.

Guiding on emergencies in software on failure of peripherals.

Change of Policy incorporation in software minimal

Re organizing the data & Tuning of Software Minimal changes in the forms not affecting the man power more than 1day.

Assistance in installing / deployment of software / Link new computer.

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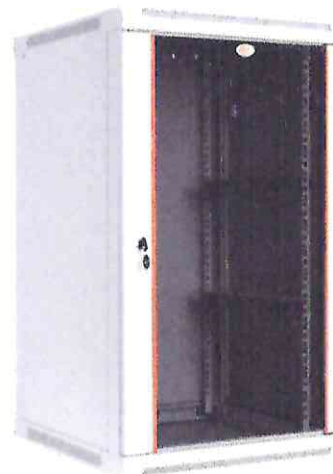
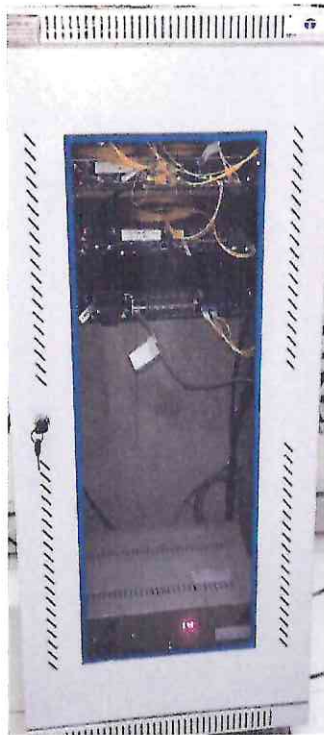
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LAN DIAGRAM

SERVER ROOM

TATA MUX



FIREWALL

VODAFONE MEDIA
CONVERTER

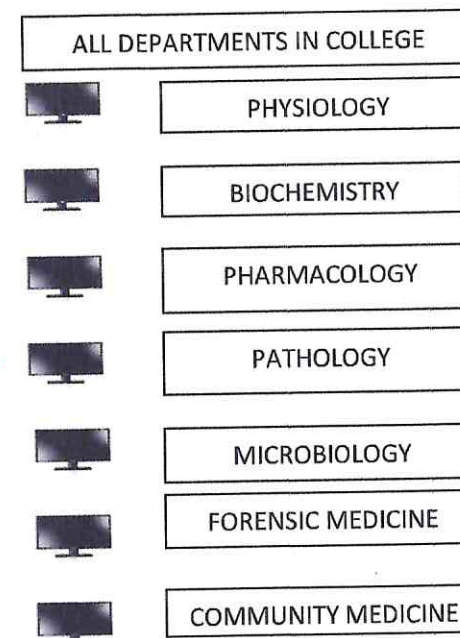
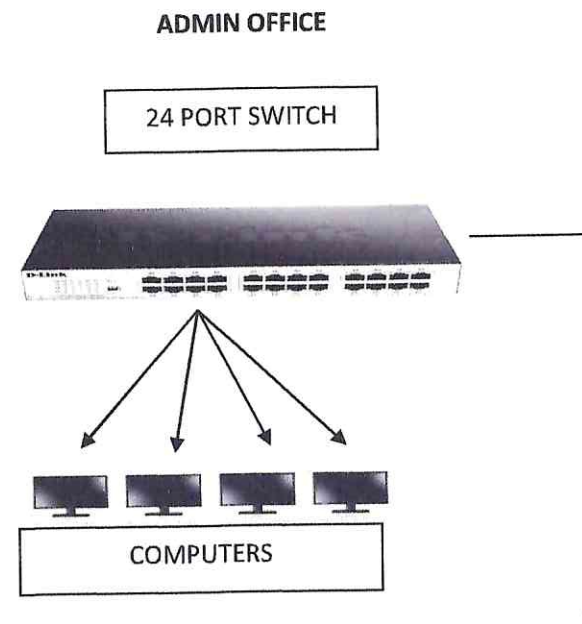
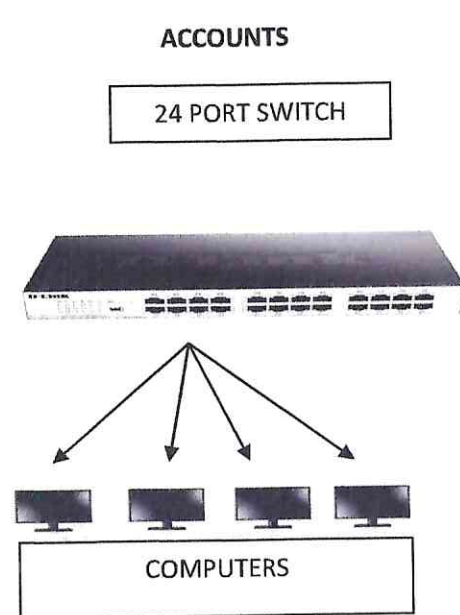
24 PORT SWITCH

INSURANCE

ADMIN OFFICE

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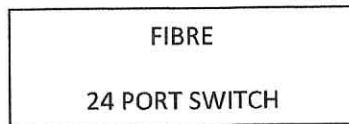



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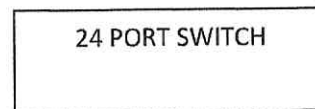
HOSPITAL

ALL DEPARTMENTS

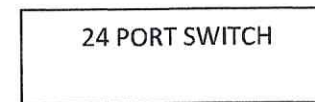
INSURANCE



MRD



PHARMACY



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